

VOL. LXV

NO. 2

# AMERICAN BEE JOURNAL

FEBRUARY 1925



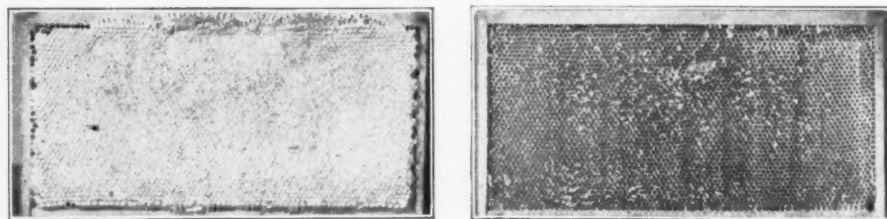
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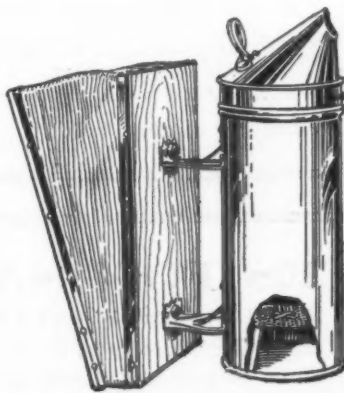


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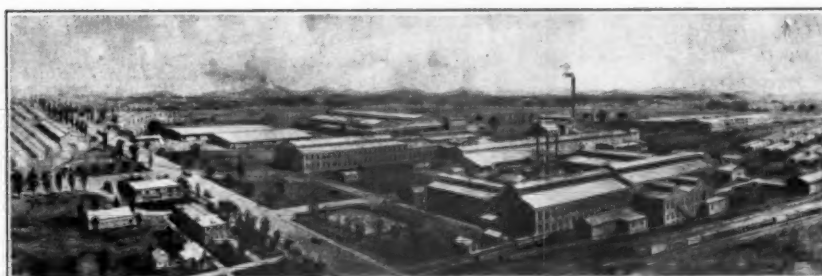
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**BEEKEEPERS' SUPPLIES**  
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STERLING Hives.  
(With metal covers)  
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Extracted Honey Supers.  
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The Diamond Match Co.'s Factories and Yards at Chico, Calif., cover 220 acres.

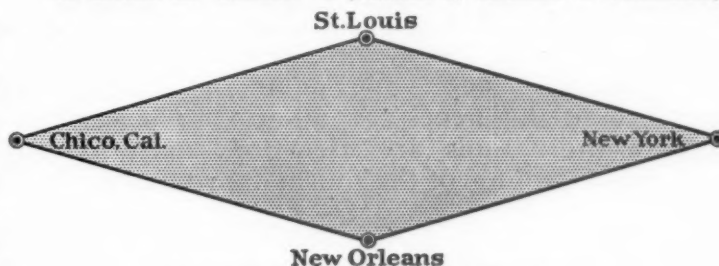
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To meet the ever increasing demand for "Diamond" Beekeepers' Supplies, distributing warehouses have been established at Ozone Park, New York, (Hoffman & Hauck); St. Louis, (The Diamond Match Co.); New Orleans, (The Diamond Match Co.) This will enable Beekeepers to obtain their supplies promptly and at a greatly reduced cost

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# HOW TO PRODUCE HONEY

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*Every person who purchases Lewis Beeware in any quantity during the season of 1925 is entitled to one years subscription to this magazine free.*



*Every line of practical information it brings to Lewis customers is gleaned at great cost from the most successful beekeepers in North America and passed on to you, free. It's just a part of Lewis service, to help you succeed. Every customer when ordering should insist that his dealer write at once to the Lewis company and have his name entered to receive Beecause.*

*Also we have the "How" booklets, 21 of them, particularly "How to Manage Bees In Spring," 5c postpaid.*

Every beekeeper who reads these lines may have a copy of "How to Produce Honey" which beside listing the items necessary for honey production, describes graphically the necessary manipulations. If you have not received a copy by the time you read this advertisement write for your free number.

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Lewis has again taken the lead. Instead of a mere catalog listing the items and their price, we are offering a booklet showing the use of the equipment and how it may be made of dollars and cents value to you. Instead of illustrating supers and showing their prices, we show first the illustration, next their practical use during a honey flow and incidentally the price of the equipment.

Special quotations given from most points for early season shipments in lots of \$100 worth of Beeware or more. Write us.



"Eat More Bread and Honey"

## LEWIS BEEWARE

### G. B. LEWIS COMPANY

Home Office and Works—Watertown, Wisconsin, U. S. A.



VOL. LXV—NO. 2

HAMILTON, ILLINOIS, FEBRUARY 1925

MONTHLY \$1.50 A YEAR

## LONG DISTANCE BEEKEEPING

By R. Beatrice Lane

I SUPPOSE that, according to the rules of narration, the beginning is the point from which to start this account of my apiarian endeavors. In order to tell you how I am now keeping bees at "long distance," I must first introduce the bee that got me started in winged work.

I was recovering from an illness which had kept me in bed for about three months. A comfortable place was fixed up for me in the back yard. You know what that means in a California suburban home. When the days grew warmer, I noticed how the honeybees came to gather nectar from the heliotrope. When weary of reading I'd sit by the hour watching the little workers.

I began to day-dream. Why not get an acre tract out from town, plant the whole garden to heliotrope and keep bees? With more interest than ever I watched the little toilers

come to the heliotrope. I wondered how the honey made from my favorite flower would taste.

After two years more work at my office and two years of "book learning" about bees, I knew that my original plan of suburban heliotrope garden was not practical. I took an eight months' leave of absence from the office and, with my sister, went up in the Feather River Canyon to start an apiary. That way I thought I could combine business with health hunting.

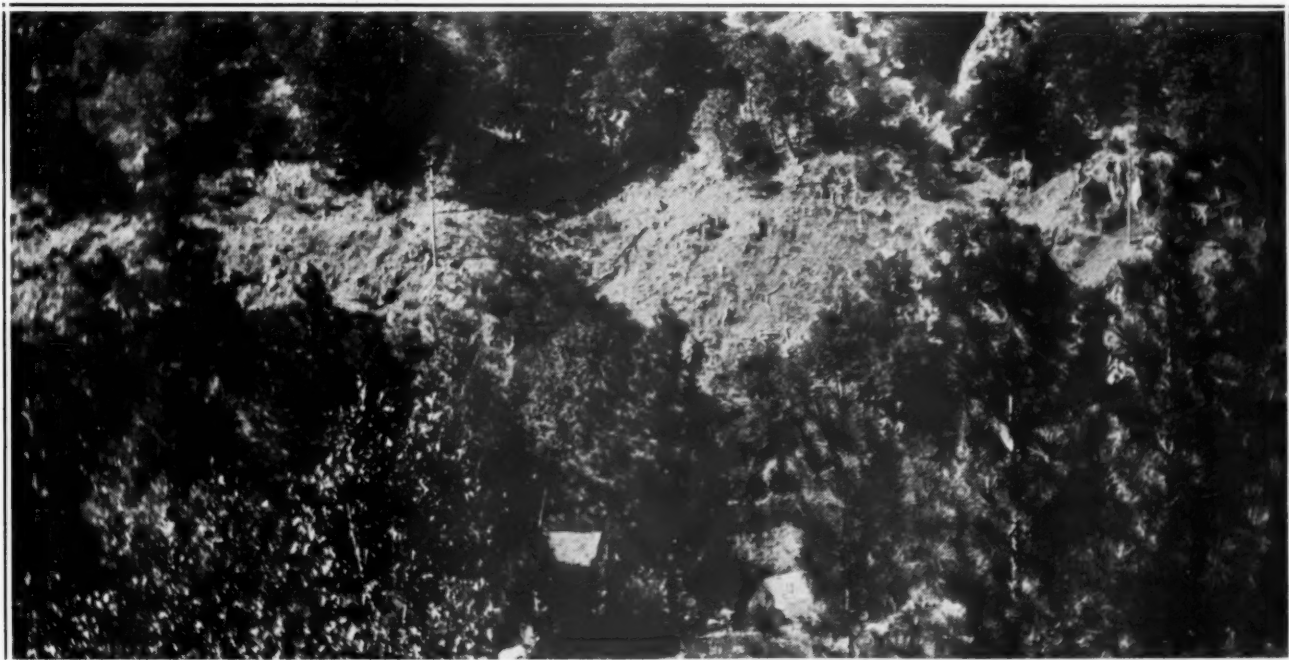
We were just about as practical as the average beginner. Our first year was to be all experimental work. We bought six 5-frame nuclei from an apiary down in the valley. We nailed and painted the hives ourselves and had them ready by the time the bees came by express. Our site was an eighth of a mile from the railroad station and reached only by

trail. Our only mode of conveyance was by wheelbarrow. We became quite expert manipulators of that kind of vehicle.

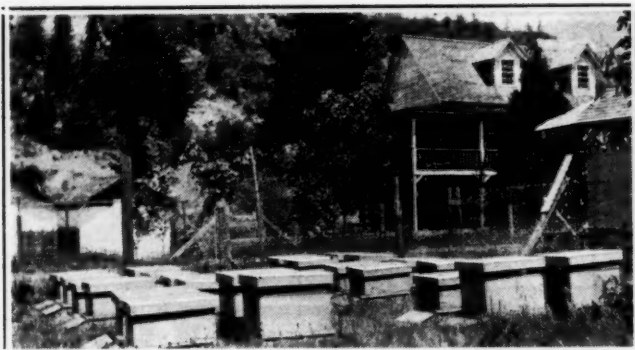
We placed five of the colonies in the shade and shelter of a manzanita thicket. It gets very warm in the canyon during the middle of the day in summertime. The sixth colony we placed in the sun with a shade board over it.

At that time we could not imagine why the bees clustered so on the outside of the hives that were in the shade and did not on the one in the sun. Of course, all you experienced beekeepers know that free circulation of air about the hives amounts to more in keeping the bees cool than shade does, but we were not experienced.

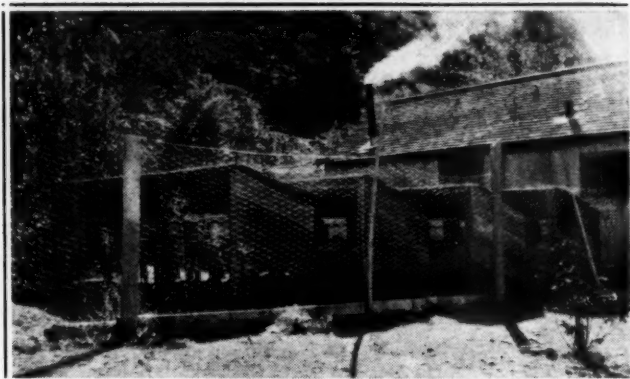
That was our first mistake. Our second was, we worked for comb



Our site was an eighth of a mile from the railroad station and reached only by rail.



We secured a location just across the street from the summer hotel.



That winter we built lean-to sheds over the hives.

honey. Personally, I do not think any beginner should.

The supreme test of beekeeping is in wintering them. We decided to move our young apiary up to the little village. It, too, was an eighth of a mile from the railroad station and reached only by trail, but the post-office was there, and we were able to rent a big lot with a summer shack on it across the trail from the hotel. To keep them warm we lined them up in a room of the house, packed excelsior between them and arranged three camp mattresses over the backs and across the tops of the hives. Then we darkened all the windows, took out one pane of glass, thinking that on the warmer early spring days they could fly out. Thus we left them and went back to the city for the winter.

The following April we went back. 'Twas well that neither my sister nor I were afraid of mice. The excelsior was alive with nests. We found four of the six colonies alive. One very strong one next to the window, the others growing weaker as they grew in distance from the light.

Early one morning we carried them to their stands in the yard. When the sun came out and shone on the hives, out came the bees, but not back into their own homes, but into ours.

We purchased twenty-five more 5-frame nuclei—bringing the supplies as well as the bees down from the station entailed numerous difficulties.

What honey we did take off that year was easily sold to the tourists. We spent much time reading up on wintering. No scheme of which we read seemed to fit our particular case. At that place in the canyon the sun shines only about two hours a day during the winter months.

Sometimes it gets quite warm in the middle of the day, but there is at all times a difference of about 50 degrees between the day and the night temperatures.

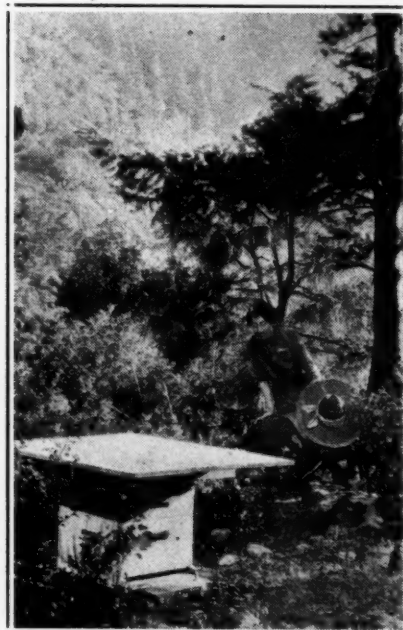
We thought that the bees would keep warmer if left out on their stands and down close to the ground. We grouped them in fours and covered them over with square box sheds, cutting openings just in front of each hive entrance. We went back to the city and left the bees to hibernate and to mould. It was a sorry

sight that we beheld the next spring. Ten colonies out of the thirty were alive. Why they, too, did not perish was a mystery after I saw the masses of mould that had once been bees.

Tenacity being the keynote of success, we tuned ourselves to that pitch and prepared for more humming.

That was an early spring, and before we knew what the bees were planning the old colonies began to swarm. At first the topmost branches of a very tall cherry tree in the adjoining lot, and high up on the limb of a stately cedar tree near the river bank seemed to be their favorite places for clustering. A very long ladder belonging to the hotel company was always at our disposal. I think I afforded the vacationists considerable amusement. Of course, there was always on hand the man who "knows all about bees" and free with his advice. You find him everywhere you go. If you are experienced he will amuse you; if you are not, pay no heed and he is harmless.

The colonies grew strong, filled the hive bodies with wonderful honey—



We placed one colony in the sun with a single board over it.

then rested. We could have taken orders enough from the tourists for honey shipments by parcel post to have kept all the colonies busy, but the bees balked.

For wintering that season we had long benches made, standing about four feet from the ground. We placed the hives on them in rows. Over them we built "lean-to" sheds, leaving them open to the east. We went back to the city that winter feeling confident that wintering had been solved successfully.

As I stated before, when the sun does shine for those two hours a day in the winter it gets quite warm. I took a trip up to see them very early in March. The sheds were covered with dead bees. Facing the east, evidently whenever the sun shone they fancied that flying was good. Out they would come, but they would get too chilled to get back and would light on the tops of the sheds and get no farther.

That spring I did not take a leave of absence from my office. My position with a transportation company entitled me to free passes on all railroads. I took a sleeper at eight o'clock every Saturday night and at six o'clock in the morning arrived at the station, where I got off to go to my bees. I'd take a return sleeper at nine o'clock on Sunday night, after working with them all day, get back to the city at seven in the morning, eat breakfast, then get to the office by eight-thirty.

About fifteen colonies had survived the winter. I cleaned up the apiary, divided the strongest colonies, and got everything in shape to move out that fall. I was now fully convinced that a place so close to a river, where everything moulds so easily, and where the sun shines so little and the temperature varies sometimes sixty degrees in a few hours, was no place for an apiary. That fall I took a week's extra vacation and spent it packing out. I had arranged with some friends who had a seven hundred-acre stock ranch about fifty miles away, down in the valley, to winter my bees there.

They met me with their automobile and trailer. It took two trips to the ranch, which was about six miles from town, to get everything hauled.



We placed the hives about fifty feet from the banks of a little arroyo. To the north the ground sloped, making a sort of second bank. In that location, which was in the thermal belt of northern California, they did not require any extra covering for the winter months.

That evening as soon as it got dark I took off the screens, hurriedly ate some supper while my host got out his car, then off to the station we sped—for me to catch the night train back to the city. I changed my bee clothes (khaki coat and trousers) to skirt and blouse, in the back seat of the automobile on the way to town.

In my sleeping car berth that night I breathed the biggest sigh of relief I'd known in three years. Never again would I attempt a twentieth century specialized industry under eighteenth century conditions. Modern beekeeping requires modern conveniences.

About two weeks after I had been back to work I got a letter from my friend at the ranch that they had been almost drowned out that week by flood waters from the big rains up in the mountains. The little arroyo was for a while a wild rushing stream spreading over its banks for a hundred feet or more. The men on the ranch had waded through the water, carried out the bees and placed them to higher ground. When I went up in March to inspect I found every colony alive and strong.

There was a great abundance of early spring wild flowers on the ranch and the bees built up rapidly. We divided them and left them there until I could find them a permanent home in a profitable location.

When the spring blossoms were gone they had to be fed until September, when the tar weed bloomed all over the wheat fields.

That summer was not quite as strenuous for me as the one before. I'd leave the city every Saturday at one o'clock and reach the ranch by eight that night. I'd work Sunday until three in the afternoon, then take the four o'clock train home, where I'd arrive at ten-thirty at night.

Again they survived the cold

weather. Early the next summer I was able to get a location in the Star Thistle district, near Chico. The County Bee Inspector, with the assistance of another successful beekeeper, came down to the ranch with a big auto truck one night and moved everything for me.

For the first time I felt that I had made a real beginning in beekeeping. I hired most of my work done that summer. I still took trips up once a month to see that everything was well. They produced enough to pay expenses and for the purchase of much additional equipment.

Again they wintered well. I wonder if anyone else ever tried facing the hives to the north so that the bees would not be tempted by the sun to fly out when it was not warm enough.

The next season I arranged with a young and enthusiastic apiarist to work my bees on a profit-sharing basis. I found this most satisfactory.

I now claim the right to call myself a practical beekeeper. I recall with amusement the days I built the "bee castles" in the air. While I did not realize that romantic life amid sweet heliotrope, I regained health and learned that—

"Tenacity, that first-born of our wills,  
It's duty ne'er neglects if clothed  
in dress

Of constant hope with cheerfulness  
for frills,

Behold its metamorphosis: SUC-  
CESS."

#### CONCERNING THE DOOLITTLE METHOD

In the August number of the American Bee Journal, page 374, my old friend, the editor, mentions an article written by myself in the "Rucher Belge," in which I mention the Wankler invention. What we both seek is the truth, and we both like to see credit given to every deserving man.

In order to bring light upon this question, I wish to call attention to the book by William Wankler entitled "The Queen Bee, Etc.," 4th edition, published by Theodore Fisher, at Fribourg. At pages 98-

100, we read the following: "In September, 1883, at the Frankfort Congress, which contained an apiarian exhibit, I exhibited 6 colonies with queens that had been reared in artificial cells, also cell bases, cell protectors, specimens of cages, artificial cells fastened to combs, a glossometer, etc. My countrymen laughed at my inventions. A foreigner, however, Frank Benton, who had visited in the Orient in 1880, and also the Island of Ceylon, and had brought back from his travels 'Apis dorsata,' was much interested in my exhibit and asked me for details of my methods of queen rearing. I gave them to him.

"Benton spoke German fluently. At this time, he resided temporarily in Munich and exhibited in Frankfort several colonies of eastern bees. During the week of the exhibition he and I took our meals several times together and our talks were about his 'Orientals' and my inventions. Benton bought my collection and the drawings which I had made of my system and I bought one of his Palestine queens. In April 1884, Mr. Benton wrote me that he approved of my method for the rearing of queens."

On pages 55 and 56 of Wankler's book, we read: "In 1881, when I first made a transfer of larvæ into naturally built queen cells, I did not yet imagine that the rearing of queens could succeed in other than naturally built cells. I gathered these cells wherever I could find them. One day, while I was grafting larvæ into cells, I found myself short of them. My deceased mother, who was then a manufacturer of artificial flowers, seeing my embarrassment, suggested to me to mould some cells, in the same manner as I had formerly used in helping her to make artificial flowers. So I took a small stick and made artificial cells by immersion in hot beeswax."

I may add that eminent beekeepers, such as Dzierzon, Leukart, Vogel, Schachinger, Gatter, Hergenrother, Balz and many others as well as myself have seen the Wankler exhibits. We can certainly admit that Doolittle made a similar invention. Thus every one will hold his place.

N. P. Kunnen,  
Ettelbruck, Luxemburg.

(We are certainly glad to insert the above, showing that the Doolittle invention appears to have been made in two countries at about the same time. But, to us, it is out of the question to admit that Benton brought the Wankler method to Doolittle, since he did not make any mention of it in his own book.—Editor.)

#### Blossom Sweet Honey Sells Well

The Sales Agent for the Marketing Association of the New York State Federation of Beekeepers reports Blossom Sweet Honey, the Association's branded product, sold in 76 cities during 1924, with 300,000 pounds of Association honey sold since July 1, 1924.



For the first time I felt that I had made a real beginning in beekeeping.

# COMB VERSUS EXTRACTED HONEY

By J. E. Crane.

**S**HALL those in districts well adapted to securing comb honey devote their efforts exclusively to producing comb honey, or raise extracted honey? This seems to be largely an economic question, and I believe, most beekeepers engaged in the production of honey on a large scale will be likely to choose the way that is likely to yield the largest profit.

Doubtless the proportionate production of comb honey is decreasing year by year, or perhaps we had better say the production of extracted honey is increasing faster than the production of comb honey. I believe it is. I believe, farther, that the demand will depend on something other than the amount of either kind produced. "There is no way of judging the future, but by the past," as Patrick Henry, or some other famous orator observed a long time ago, and I find a good deal of comfort in looking back over the years and trying to understand the lessons they would teach. I remember some seventy-five years ago of my father coming home and telling a pitiful story he had heard of a farmer, in a new part of the West, who had taken a load of wheat to town to sell, but was unable to do so, or even to give it away, and rather than draw it back home, dumped it by the side of the road.

On his way home, as the story runs, an officer overtook him and compelled him to return and remove the wheat from the roadside.

Now this does not show that wheat was of no value at that time, but rather so little had been produced in that place that there were no buyers at that time.

It was about 1868 that the extractor was introduced into the United States, and within two or three years extracted honey began to be sent to the New York market. Strange as it may seem today, there was no more demand for it at that time than for wheat in the western city. I remember very well a letter from D. W. Quinby to the American Bee Journal written at about this time, begging beekeepers not to send any more extracted honey to New York, as there was absolutely no market for it. D. W. Quinby was a brother of Moses Quinby, and at that time I think the largest dealer in honey in New York.

It would be interesting to know just how many pounds of extracted honey New York will take today. I was told a few years ago, by good authority, that the National Biscuit Company alone required about one hundred carloads in their business each year.

Bottling honey has become a large business these late years. The demand for either comb or extracted will depend much on how it is advertised or pushed. I believe our country would take all that is likely to be

produced in the near future if the value of honey as food was known. We are shipping honey this week to fill orders from Georgia, Louisiana, Montana and other sections. Now I do not suppose our honey is so superior that lovers of this product should send one or two thousand miles for it, but they doubtless sent because they did not know where else they could get it. This shows the necessity of advertising in every legitimate way.

Another illustration: Last week, at the meeting of the New York State Beekeepers' Association at Buffalo, one evening's session was broadcasted by radio. The next day a beekeeper living some thirty miles away had four or five orders for honey from persons who had become interested in honey from listening in the evening before. Suppose the value of honey could be broadcast all over the United States and every beekeeper had received as many orders, how many extra pounds would have been sold? I don't know, but I am sure it would be a good many.

Much can be said in favor of extracted honey as a food; even more can be said in favor of comb honey, as the most wholesome, healthful, and delicious sweet in all the wide world.

The surest way to increase the production of comb honey will be to increase the demand, and the more emphasis laid upon the superior quality of honey in the comb, when advertising, the greater the demand. Or, to put it in another way, the higher the price, the greater will be production. The lower the price the greater the consumption of any food produced, other things being the same. If the wholesale price of comb honey were to go up to eight or ten dollars a case, while extracted honey would only bring present prices, it is doubtful if any urging would be needed to induce beekeepers to produce comb honey instead of extracted.

The lower price of extracted has increased consumption of it as well as the demand for it.

A good many years ago I bought the finest grade of California white sage extracted honey, in Boston market, for 6 cents a pound and shipped it to Vermont and sold at a fair profit. Presumably the California beekeepers did not get rich producing it, but the low price for which it sold increased the consumption of it and later a demand for it.

I see no cause to feel anxious for the future. I believe the consumption of honey is increasing faster than our population.

Previous to sixty years ago it is doubtful if more than a ton of honey had ever been sent out of Champlain Valley, in any one year. Now, in a good year, we can ship out several carloads of comb honey besides a good deal of extracted. Does not the future look hopeful?

(The weight of the statements made in the above article by our old friend, Mr. Crane, will be more apparent if we quote an article which we find in the American Bee Journal for January, 1872, or 53 years ago. It was from a beekeeper of Tennessee, Mr. S. W. Cole, who had just attended a beekeepers' convention at Cleveland. He wrote, in part:

"We went to the convention strongly prejudiced in favor of running our apiary for extracted honey alone, as we have it arranged now for that kind of management; and as we commenced this year with only eight double hives and seventeen single ones, and increased the stock to thirty-six two-story and sixteen single ones, and obtained nearly two tons of extracted honey, we felt certain that in another year, we could increase the stock to one hundred colonies and obtain ten thousand pounds of honey. This, even at 10 cents per pound, would pay handsomely. But where could we find a market for all this bulk? And as there are hundreds of beekeepers who could and perhaps will do the same thing, is there not danger of the business being overdone?"

Mind, that this question of overproduction was being raised at a time when perhaps less than half a million pounds of extracted honey was produced annually. Probably, in another fifty years, ten times as much extracted honey will be produced as is produced now, and there will still be beekeepers who will fear overproduction, without any more ground for it than there was then. What we must overcome is not overproduction, but insufficient distribution.—Editor.)

## Beekeepers, Take Notice

Denver, Colo., Dec. 15.—John E. Nelson was sentenced to two years and six months in the Federal Penitentiary at Leavenworth, Kans., today after he had pleaded guilty to an indictment charging use of mails to defraud.

Nelson was indicted on three counts, two as the result of swindles in Nebraska and one in Iowa. He advertised in newspapers that he had honey for sale. Customers who answered, sending Nelson money, received no honey. An investigation by Federal authorities showed that he had no bees.

In 1922 Nelson was convicted of a similar offense, for which he served one year in the Kansas prison.

## Beekeeping in Wisconsin—Circular 174

This is a 24-page pamphlet, written by J. I. Hambleton, while he was an assistant in the Department of Economic Entomology of Wisconsin. It is up-to-date and contains a number of engravings, one among them showing six photos of bees with pollen on their legs, displaying the manner in which this pollen is carried.

The booklet can probably be obtained from the Agricultural Extension Service of the University of Wisconsin, at Madison.



# SAINFOIN AS BEE FORAGE

By William Wilson

SEEMING that the above subject seems to be of some interest to some of your readers, as shown by Mr. Alfonsus' article in July number and "Florida's" remarks in the September issue, I thought perhaps a few observations by an English beekeeper in France, might be acceptable. Let me say in the first place, that this district is known as "Le Gatinais," which has been famed for years as the principal one for growing sainfoin for forage-hay and seed, and the land it occupies yearly is from one-quarter to one-third of the total of all land in cultivation. The farmers swear by it, as being the best plant not only for green forage and hay, but also for building up the soil for the following exhausting crops, in rotation, such as sugar beet and wheat. There are two sorts grown, viz.: the French Giant (a one year crop), and what they call the "common." The former is grown mostly where the soil is shallow and light, and the other is grown on the heavier deep soils. They are both seeded down in April, with oats and barley—never with wheat.

The seeds are broadcasted when the young grain plants are about 3 inches high, and the seeds simply rolled in. The grain is cut in August, and in dry summers you wonder where the sainfoin is, as by that time hardly a blade of sainfoin is to be seen. It is some time after the grain is harvested that the young plants begin to peep up, and if it has been wet, in two weeks' time the fields are a carpet of green. Last autumn it was very dry during August, and at that date, when I came to explore the district, with a view to locating here, you had to look with a microscope to see any new sainfoin plants, so much as it was my first visit, I had my "doots" that the tales I had heard about the hundreds of acres of sainfoin was a myth. However, as I trusted the word of a friend, who said: "The sainfoin is there, right enough," and located here as a beekeeper, I have no regrets, as by the 20th of May my heart was made glad, and I felt young again, as I stood in my garden and saw the pink patches of sainfoin flowers stretching on every side of me. In my particular part, the soil being heavy, it is only the common sainfoin they grow, and it is mixed, half and half, with lucerne (alfalfa) seed. They grow along together, but in the first year the sainfoin seems to be the stronger and by the 20th of May or so (the average date at which the sainfoin begins to bloom) the lucerne is not in evidence. The sainfoin stays in bloom for about 28 days, when it is cut for hay. This is where the beekeeper scores, as his bees get the full benefit of the flowers, and it is the only plant I know of that will make good hay after the flowers have faded. The farmers do not leave it for the benefit of the bees, of course, but

they say it makes the best hay then. One month after the first cut, it is in bloom again—when in full bloom, the lucerne is just starting to bloom, and both are cut again when the sainfoin flowers are falling, and the lucerne in full flower. They say that the second cut, having the benefit of the lucerne, gives as many tons of hay to the acre as the first crop. The sainfoin flower does not, of course, last so long in the second crop by 10 days or so, but it seems to give nectar quite as freely. After the second crop one would think it had done its bit for a year, but oh, no; it comes up smiling again, and at this date some of the farmers are cutting a third crop, the flowers of which would have been a God-send for the bees to stimulate late brood rearing, only it rained every day that the third crop was in flower. Though I believe, it is quite possible for this sainfoin to go on cropping for 10 years, they plough it up here after 3 years, sugar beat root following, which is such an exhausting crop for the soil. This rotation is best:—wheat, oats or barley—then sainfoin. I have never known a plant to equal it as a nectar giver, and it seems to give nectar in all kinds of weather, barring heavy rain, but even after heavy rain, as soon as the rain stops, the bees come in, seemingly as heavily loaded as ever. To my idea this has been a very bad year for nectar secretion, so much so that, according to my diary, we had only 3 days of real honey-getting weather, the rest either being calm with no sunshine, or sun with a high wind; but my hive on scales rarely showed less than 5 pounds daily increase. Some days I felt fully convinced that my scales were not working right. At the first of May most of my stocks were not over nuclei strength, the very strongest not having more than 3 frames of brood, and bees covering 6 combs. (This was caused through food shortage, and transporting them from the south—getting all strong lots smothered in the process). Yet by the end of May those weaklings were working on frames with the top chamber full of honey, and they were mostly common black bees, at that.

I must say a word about the honey. While "Le Miel de Gatinais" has been famed all over this continent for ages, and is a household word in France, I never tasted it till last year. It is a honey by itself, being to my palate much sweeter than other honeys. They call it white honey, but it is not white, but a pale amber or straw color, and though the sainfoin flowers are a deep pink, the pollen it gives is yellow; while working on it, the bees come in all yellow. The new wax they build is also quite yellow, and the cappings are a lovely saffron shade, a new capped sainfoin honeycomb is the loveliest sight I ever saw.

It seems to stand frost well, as we

get some hard frosts here at times, but to my mind, its most wonderful part as a bee forage plant is in giving abundant nectar, in weather which no other honey plant I know of would secrete a drop.

If the editor would like to try it at Illinois, I would be glad to send him some seed of both kinds and some soil, if he should deem that necessary. This offer applies to "Florida" as well.

Ontarville, Loiret, France.

## PROMISING EXPERIMENTS IN STERILIZING FOULBROOD COMBS

Considerable experimental work has been done with American foulbrood during the past three years at the University of California Farm. A note on some of these experiments in progress and the results might prove of interest to the readers of the American Bee Journal.

The object in view has been to discover a cheap method for sterilizing infected combs. The alcohol-formalin treatment (Hutzelman process), has proven a satisfactory sterilizer, but the cost has been higher than was anticipated. Successful attempts have been made to sterilize the combs with cheap fumigation materials. Bromine, chlorine, formaldehyde and other gases are all efficient sterilizers for American foulbrood organisms, when the conditions are right. The processes are not worked out to entire satisfaction as yet.

Various mixtures of formaldehyde (formalin), in soapy waters, have been used on many combs. The results are very encouraging as to sterility and cost. Not only is the cost of material surprisingly low, but the combs are found to be absolutely sterile of all life. The treated materials are tested out both by being supplied to clean colonies of bees and by culturing for bacteria in laboratory media. Brood reared in these treated combs is healthy and otherwise normal.

It seems safe to predict that a very cheap solution (mixed at home) will be available for use to beekeepers before another season is finished. Neither American foulbrood nor the cost of its control, need longer handicap the beekeeper and honey producer as they have since the advent of the disease into this country.

The experimental work will be continued and a full report given after completion. A word at present as to successful results will no doubt serve to encourage many.

G. H. Vansell.

Davis, Calif.

## Phillips From WGR, February 4

On February 4th, Dr. E. F. Phillips will broadcast from WGR, on the subject "How Honeybees Help Agriculture." Tune in you fans, and hear him.

## Honey Golden Wedding

Mr. and Mrs. William Lawrence Honey, of Knob Noster, Mo., celebrated their golden wedding, December 17th.—St. Louis Globe.



# AMERICAN BEE JOURNAL

Established by Samuel Wagner in 1861.

The oldest Bee Journal in the English language. Published monthly at Hamilton, Illinois.

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## ANOTHER DISEASE?

The "Scottish Beekeeper" for December contains an article from our old friend, J. Anderson, M. A., B. Sc., on what he calls "addled brood."

"There is no shriveling of the brood as in sacbrood, no melting into a slimy mass as in European or American foulbrood. The brood apparently matures to a remarkable degree, pigmentation having almost reached its maximum, but the young bee never emerges, and from its position in the cell—on its back always—it would appear never to have moved since pupation."

As the disease has never been known before, and as it appears only locally, we trust it will turn out to be some harmless trouble, easily overcome.

## TRADE SECRETS

I received, not long ago, a letter from one of our European friends, complimenting the Americans upon the freedom with which they impart their knowledge to others. He wrote:

"When you discover a new method of honey production, a new use for honey, you publish it at once. Here, when we find the opportunity to do something in a better way than our neighbors, we take good care not to let it be known, so as to keep the 'trade secret' to ourselves."

I believe that it is true, that the American nation is more lavish of information than any other; this is due to the fact that we gathered on this side of the Ocean from all parts of the World and brought from all sides the ideas which have helped the country to develop; although some people would have us believe that the country developed only because the Anglo-Saxons came. So we are, as a rule, more lavish of information than they are in the old countries; we feel that there is room for all, while over there the battle for life is more harsh and keen. But we must acknowledge that they have given the world, and are still giving it, plenty of information and trade secrets. In doing this they help others as well as themselves.

## I. O. W. DISEASE

Nothing much is heard nowadays concerning the Isle-of-Wight trouble. Yet it has been working considerable loss, in Great Britain. One of our correspondents who spent much time studying the disease and trying to find a remedy, writes:

"Beekeeping is still very much under a cloud, owing to I. O. W. disease. I managed to get together 30 colonies during 1921, but in 1923 lost all but one of these. I built up a bit again during the past summer and so far the colonies I have appear to be healthy. But past experience does not make me very optimistic in regard to the immediate future. Many remedies and preventives are announced, but so far none of them has stood a practical test."

As the *Tarsonemus woodi* has been found in France and Switzerland, but has worked little or no havoc there, we believe that the moist climate of England must have something to do with the virulence of the trouble.

## OKLAHOMA TO THE FRONT

At the suggestion of Glen V. Mills, a wide-awake beekeeper of Muskogee, the Oklahoma Free State Fair is planning to erect a special apiary building, to house the bee and honey exhibits. This building is to be in the shape of a Langstroth hive and our editor was courteous-

ly requested to come and dedicate it, at the 1925 show, October 3 to 10. We shall have occasion to speak of this again. Those young states have a way of doing things that their elders failed to discover. Progress is the watchword. There should be a good attendance at this dedication. Some of our people who have never visited Oklahoma had better plan to go.

## NATIONAL FOULBROOD ERADICATION

At the last Michigan meeting a resolution was adopted favoring the project of National foulbrood eradication as much needed assistance to the beekeeping industry of Michigan.

It might be well if the National work of eradication should be additional to that of the states, and in proportion with the steps taken by the states for the work. This would have a tendency to spur the states to action, in order to secure national aid.

## SCENT AND SCENT PRODUCTION

Mr. Bruce Lineburg, of Johns Hopkins University, has written a contribution to the "American Naturalist," November-December, 1924, giving a very rational theory of the existence of a scent produced by bees when they find supplies, which would attract other bees upon the same route to the supplies.

We all know that bees have odor; not only that, we all know that each colony has its own particular odor, that queens differ from drones, or workers, in their odor. Then it is very easy to accept the theory that a bee that finds honey or some plunder may emit a peculiar scent which attracts other bees in that direction. Many things remain for us to learn and each student may help a little in finding facts. Many things that we thought impossible 20 years ago are matters of common knowledge today.

## OLD TIME FRIENDS

The holiday season is a very nice one to permit the renewing of old friendships. It is just over, at the date this is written. Among the most interesting letters, we received one from Mr. Thos. Wm. Cowan, of England, senior editor of the British Bee Journal, author of books that have been translated into eight or nine different languages; books that will remain standards of information for many years, as they are very accurate.

Mr. Cowan is 85 years old. He lived in the United States several years and we had the pleasure of his visit then. When we visited in Switzerland at the home of our mutual friend, Ed. Bertrand, who was for 25 years publisher and editor of the *Revue Internationale d'Apiculture*, Mr. Cowan came all the way from England and we were told that he was doing it so that we three could meet together once again. Mr. Bertrand passed away several years ago. Mr. Cowan writes me: "I expect you find, as I do, that old friends are going one by one, and as we get old we are less apt to make new ones. As we get old, we outlive our friends, and I can realize how many I have lost, even during the past year."

That is true. At the International Convention of Quebec I was the oldest man present, and at Illinois, in December, I was also the oldest man until our friend James A. Stone, who was Illinois' Secretary for over 30 years, came. He is considerably past 80. But the Old Guard of 40 to 50 years ago has almost disappeared. When two of them meet, there is renewed pleasure.

## NEBRASKA HONEY PRODUCERS' MEETING

I attended the meeting of the above Association. It was held at Lincoln and was a part of the program of "Organized Agriculture," held January 6 to 9, at the Agricultural College.

I understand that there are some 300 members of the Nebraska Honey Producers' Association, but only about 40 were present. Yet they say it pays them well.

The program was splendid, even if I was on it. Mr. Jessup, an alert young man from Council Bluffs, gave some notes on wintering and packing bees for winter. He has evidently studied and practiced the subject.

Mr. O. E. Timm had an address on "The South as a Source of Supply of Bees and Queens." He was not there, but his paper was read. He realizes and explains that the South is slow in coming to the front in practical bee culture; he criticizes the breeders severely, but if he has had as much experience in queen breeding as I had in my young days, he would be ready to sympathize with those Southern breeders when things do not turn out as rosy as it is customary for human beings to expect. The South has irregular springs, and it is well to order your queens early from there, if you want to make sure of them. After all, the South is the place to supply us with early bees or queens.

Mr. A. H. Dunn, of Council Bluffs, gave a long address concerning honey sales and recited some of the experiences of the Root people in handling honey and creating a market. He properly criticizes beekeepers who will sell their honey at retail as cheaply, and sometimes more cheaply, than they will sell it at wholesale. So many do that without appreciating the fact that they are cutting their own throat as well as hurting other producers and the dealers. Can we ever get beekeepers to see the honey selling idea properly?

The address of Mr. F. M. Coe, another young man from the Agricultural College, was of very great value, for it described the troubles of the beekeeper and fruit grower in what concerns both pursuits. Each of these producers needs the other, and they generally appreciate this need. But a few fruit growers are less appreciative than they should be, of the value of bees in fertilizing the blossoms; so they do not use as much care as they should in protecting them from poisonous sprays. Mr. Coe recommends that beekeepers and fruit growers should work hand in hand in favoring the work of bees upon the blossoms and should use and urge the use of repellents, whenever there is danger of poisoning bees. Mr. Coe recommended a preparation called "bee-zoff," also called "milkol," from the Sulpho-Naphthol Company, 14 Bedford St., Boston, which will be efficient to make a good repellent if used in lots of one pound for every hundred pounds of spraying mixture of whatever kind. I do not believe in giving advertisements in our editorials, but if this will help to save a few thousand bees, the Sulpho-Naphthol Company are welcome to our recommendation.

I want to criticize the organization of the Nebraska Honey Producers. I have been acquainted for years, yes at least 25 years, with the Colorado Honey Producers, and I know they are one of the most useful organizations in beekeeping. I thought the Nebraska people were organized in the same way, with a capital stock and a steady membership. But I found out that anybody can become a member just as he can with any other beekeepers' association, by paying a dollar a year. For this dollar, each member gets the services of the secretary, practically free of charge, in getting a discount upon any bee goods he wishes to purchase, on any subscription to bee magazines, besides getting information concerning the crop and honey sale prospects. The secretary gets —? He probably gets a chance to be scolded by some unreasonable member, if his order for supplies is either delayed or mis-sent. The member gets a discount of 10 to 15 per cent on supplies, 15 to 35 per cent on magazines. The association is to get 3 per cent out of the 10 per cent. The Secretary gets—the honor of doing the work. Mr. F. M. Parsons, who is a splendid Secretary, acknowledged that it was getting to be a hard task; but he does not complain, because he is proud of his association. I have seen a few of just such men, but they are not very numerous. Cervantes wrote: "The ass will carry his load, but not a double load; ride not a free horse to death." If the members of the Nebraska Honey Producers' Association find a profit in their com-

bination, as I am sure they do, why not organize in a way that will make the business permanent, as a stock company, giving profit to the members according to the amount they have invested, and paying the officers according to the labor they perform? It is none of my business, except that, as editor of a bee magazine, I should very much like to see the bee associations become permanent. But an association cannot be permanent unless its officers are paid enough to indemnify them for their labor.

There, now! Think it over. We have had associations fall down on just such conditions. Beekeepers are very much like farmers, they do not see both sides of the question of co-operation. But there are examples of failure and examples of success. Let us follow those who have succeeded.

## AMERICAN FOULBROOD

Here is a scientific study of the "Development of American Foulbrood in Relation to the Metabolism of its Causative Organism."

The greatest hindrance to the proper grasping of scientific studies, by the average man of common school education, is the lack of understanding of scientific words. Yet those scientific words are needed, because they often express, in a single word, a long explanation. "Metabolism" of the organism which causes foulbrood represents the change, in the living matter, of the organism from the beginning to the end of its life.

That it is difficult to detect, in the millions of minute living organisms, the one which causes a certain trouble, or a certain disease, has been well proved by the fact that as learned a man as Frank Cheshire, seconded by as capable a bacteriologist as Cheyne, mistook *Bacillus alvei*, an organism which is only produced in decaying matter, for the cause of what we call American foulbrood, which is engendered only by another *Bacillus*, *Bacillus larvæ*. It was for one of our own scientists, Dr. White, to discover this and prove it. So it is actually an American discovery.

The little reprint of 40 pages, with the above title, now before our eyes, is the work of Dr. A. P. Sturtevant, of the Bureau of Entomology, republished from the Journal of Agricultural Research by authority of the Secretary of Agriculture. We will not attempt to give a review of it. Those who are interested may get it from the Office of Bee Culture, of the Bureau of Entomology, at Washington.

## FROM OUR ASSOCIATE EDITOR

Mr. Pellett has gone South to visit with the beekeepers of Texas, Arizona and New Mexico. His letters are interesting. On January 3rd he writes from "Somewhere in Arkansas:" "Coming South in January, the range of climate is very marked. North of Keokuk, the river was frozen so hard that autos were crossing on the ice. At St. Louis there was only a narrow fringe of ice along the shore. This morning, at Little Rock, there was neither snow nor ice, and the air was filled with fog so dense that one could hardly see across the streets. Now, having passed Curdon, the air is balmy and it seems like spring.

"St. Louis is the real dividing line between the North and the South. South of St. Louis we find the divided coaches with separate compartments for the black folks. Here the black race was subject to the white for too long a time to forget it in one generation. Yet there is a measure of affection between the young of the two races here which one never sees at home. The white man has a feeling for the negro mammy who cared for him in infancy which is akin to the love we feel for the members of our own family, yet he would not, under any circumstances, eat at the same table with her. This is beyond the understanding of a man from the North."

## A SERIES OF MEETINGS

The editor proposes to attend the South Carolina meeting, then a meeting in Cornell, then meetings in different cities of New York State, finishing with the Columbus, Ohio, meeting February 7. Some report of those meetings will be made in the next number.



# BEES AND MEDICINE—Apipuncture

From France Apicole, August, 1924.

It was long before this day that they began to attribute curative virtues to the bees and their stings. One may read in old sorcery books most fantastic formulas based upon the honeybee. With its body, which they steeped or reduced to powder, they manufactured elixirs, lotions and ointments, and even poultices, which were of the most beneficial effect upon earache, leprosy and—the loss of the hair.

In the Nineteenth Century all these formulas were forgotten, but by way of compensation, the efficacy of a treatment of rheumatism, with bee stings, appeared to be established as a dogma. In 1859, the "Abeille Medicale" published an article from Dr. Desjardins, praising the advantages of this particular treatment, adding also the statement that two skin cancers of the face had disappeared through the use of stings. Later, in 1864, in the "Gazette des Hopitaux," Lukomski, professor at the Institute of Forestry of St. Petersburg, also proclaimed that the sting of honeybees was supreme for the cure, not only of rheumatism, but also of neuralgia and intermittent fevers.

Dr. Henri Bouquet, in an interesting article published by the newspaper "Le Temps," on January 21, 1924, after having recalled these previous facts, gave the following, in addition:

"Fabre (of Commentry) having reported these facts to the Academy of Medicine, the information reached, through the newspapers, the town of St. Jean-de-la-Mer, near Nice, where a poor fellow, suffering with articular rheumatism of the knee, dragged himself to his apiary, dressed in such way that the only part of his body exposed was the suffering joint, caused his bees to sting him for a quarter of an hour, after which time he was cured. Two inhabitants of neighboring villages later secured the same result.

A physician of Marbourg, in Styria, named Terc, had already erected this "apisination" into a system, following his own researches. He had been impressed by the fact that beekeepers, often stung by bees, appeared immune to rheumatism and had also noticed that bee stings were less painful to rheumatics. He had concluded that there was an antagonism between the virus of the disease and the venom of the insect. During 26 years, he used bee stings in more than 500 cases of rheumatism, with constant success. He would cause the patient to be stung in the vicinity of the suffering joint, by a large number of bees (up to 70) at each treatment. The cure was sometimes rather slow in coming (a rheumatic woman had been stung 6,592 times), but it sooner or later succeeded.

In 1908, Dr. Cartaz published in the magazine "La Nature," an article upon the same question, in which he stated that Dr. Ashley Walker, pro-

fessor at Oxford University, made a careful investigation of the curative value of bees, gathering his information directly from physicians and patients, and that his conclusions positively established the benefit of bee venom for the relief of rheumatism.

Dr. Cartaz added:

"One of our colleagues, Dr. Lamarche, of St. Marcellin, quotes a personal experience, which does not leave room for doubt; several of his clients assured him that they had used this method with success when other remedies gave no results. He is himself liable to muscular rheumatism, rheumatic neuralgia; as he is a beekeeper, he has caused himself to be stung, and no longer suffers of these troubles. He tried this method in a case of extremely painful chron-



A patient suffering from leprosy, treated and cured by the Lautal apipuncture treatment in 1912.

ic sciatica, upon a woman who spent her nights in groaning. She was relieved after five stings, and cured after a few more sittings. The French and English beekeeping magazines published numerous cases of rheumatism cured by this process. Dr. Burton, of Birmingham, even gave a personal proof, in the British Bee Journal:

"He was suffering, for three months, of a painful sciatica, which steam baths hardly eased. He tried bee stings, eight in all, and the following day he was able to walk without pain and without limping."

In July, 1910, Dr. Maberly made known, in "Lancet," the repeatedly observed results of cure of rheuma-

tism by the method of bee stings; adding that, if the good result was not always absolutely satisfactory, it frequently brought about a great relief in obstinate cases. Besides, the method is inoffensive. They begin with 5 or 6 stings, without ever going beyond 20 to 24 at a sitting. The bee is applied on with pincers or with glove-covered fingers, and the sting is removed at the end of a few minutes.

Drs. Marfort, of Geneva, E. Monin, of Lyon, and Kruger, of Nimes, have also published articles upon the cure of rheumatism by bee stings.

But apiarian therapeutics does not appear to be limited to the relief of rheumatism; it also seems to branch out towards the treatment of divers diseases, several of which have been considered incurable. The initiative of those cures is due to a Marseille apiarist, Mr. Ernest Lautal, who is also a philanthropist. I cannot do better than cite the origin of the treatment established by him, by the use of bee stings, and known now under the name of "apipuncture," through a quotation of the "Petit Meridional" of Montpellier, in August, 1910:

"We have known for some time already, through medical magazines and bee books, of the beneficial influence of bee stings in rheumatisms. We know that formic acid drives uric acid from the organs and returns to them their suppleness and elasticity. The bees of themselves can inject that acid into the blood, in a pure and natural condition. The treatment is simple, its application may be a little more difficult. The diffusion among the masses of so eccentric a treatment was tempting for a philanthropist who was also a specialist. This specialist is Mr. Ernest Lautal, a distinguished beekeeper who spent his life with those admirable insects, which, in addition to the services they are rendering to man, do marvelous things in medical cures.

"Mr. Lautal has installed a model apiary in Marseille and has opened, in the same city, No. 27 Rue St. Savournin, an office where he treats, not only the rheumatics, but also the people suffering from gout, lupus, eczema, epithelioma, by having them stung every day until fully cured. Mr. Ernest Lautal is well known in our region. Some twenty years ago, he installed a model apiary at the "School of Agriculture of Montpellier" and gave apiarian addresses upon the quintessences which may be obtained from bees, including even their stings.

"Mr. Lautal has been curing people for fifteen years by his methods and has made a profession of it during the last three years. He treats the destitute gratuitously."

Here is what Mr. Lautal said, himself, of his discovery, in a notice published at Marseille, December 4, 1910:

"I did not have the least idea that honeybees would be useful some day in curing eczemas, lupus, epitheliomas, for no doctor has ever recognized this ability in them. But des-





Mrs. Frontera, cured of a face lupus, in 135 sittings, from October 20, 1909, to May 6, 1910, with 1925 stings, applied by Mr. Ernest Lautal. The complete cure was certified by Dr. Mireur, of Marseilles, in May, 1910.

perate patients, who were disposed to put an end to their life, came to ask me for bees. I sold some to them. I applied them upon them myself and they are now happy in being cured.

I was, for many years, annoyed myself by an eczema over my whole body, but especially upon my hands and forearms. It is unnecessary to state that I had followed the instructions of several dermatologists, with constant failures. One day, while handling a colony of bees, I was stung on the left arm, against my wishes, by several hundred bees. I was anxious about this accident, for it had caused me great pain and I was afraid that it might increase my exanthem. Great was my astonishment when I saw the eczema lessen and finally disappear from this limb. I conceived the idea of trying the same treatment upon my right arm, and so arranged to be stung voluntarily upon it. The result was similarly satisfactory. I continued the experiment and succeeded within a few days in causing all my skin troubles to disappear. As a test, I tried the treatment upon others and was similarly successful.

"I then extended the field of my experiments to the treatment of tuberculous affections of the skin, to the divers forms of lupus, and there also I had unexpected and surprising results.

"Several rebellious and tenacious neuralgias gave way as rapidly with apipuncture, and I foresee the time when treatment by bee stings will be an active method against eczema, lupus, cancer and a host of other diseases."

After having thus described the genesis of apipuncture, Mr. Ernest

Lautal added that he stopped epileptic crises short, with a few bee stings, and recommended using them to diagnose death. He deems that, in cases of doubtful death, it would be well to use the bee stings as control, before delivering a permit of burial, because bee stings determine a skin reaction upon living people.

These bold and novel ideas, even at the early time when they were expressed, interested Dr. Boinet, physician-in-chief of the hospitals, and supplementary professor at the Fac-

ulty of Medicine of Marseille, and although these had nothing to do with the teachings of the School, he liberated himself from any prejudice and, to his credit, put them to the test of experimentation.

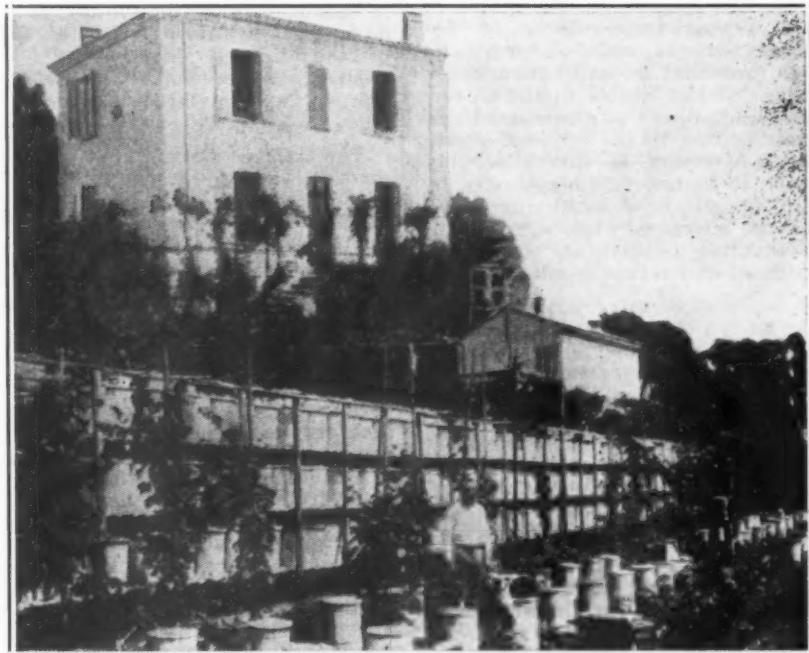
On the 8th of October, 1912, the "Petit Provençal" announced over the signature of Dr. Mireur, that Dr. Boinet had made a communication of the deepest interest, at the "Congress for the Advancement of Science" of Nîmes, in August, 1912, upon the differentiation in diagnostic between apparent and real death by the method of apipuncture of Mr. Lautal.

"Dr. Boinet established, upon actual facts. 1st, that bees refuse obstinately to sting a corpse, and drive in their sting only when compelled by direct applications and continued pressure upon their abdomen. 2nd, that bee stings, when applied upon a corpse, produce no appreciable action and are not followed by an inflammatory areola, such as is produced upon a living being.

"In consequence, Dr. Boinet concludes that the diagnostic based upon bee stings could be utilized in doubtful cases, in the absence of a physician."

Dr. Mireur closes with praise of Mr. Lautal, as the inaugurator of this method and the operator in the experiments above mentioned.

However, Dr. Boinet did not stop there. He also wished to ascertain whether apipuncture was positively efficacious in the different cases mentioned by Lautal. The first results which he obtained having appeared of interest, he caused the originator of apipuncture to be authorized to install hives of bees in the two principal hospitals of Marseille, Hotel-Dieu and Conception, and entrusted sick people into his hands. The cures brought about by this method were



Apiary of Ernest Lautal, from which he secures the bees used in the treatment of his patients.

marvelous; as early as 1912, Dr. Boinet, without asserting any cure, was already publishing that a case of leprosy, treated at the Hotel-Dieu with bee stings, showed startling improvement. This cure was also mentioned by Professor Gaucher. The war began and apiculture, like many other things, was somewhat neglected by the Faculty, while Lautal, without any display, continued the series of his cures and the gratuitous treatment of the indigents. But lately, Dr. Boinet, having again taken up his experiments, with the help of Lautal, made known the success of the treatment by bee stings in cases which had been considered incurable. In 1923, a second case of leprosy was cured by stings. The Lautal treatment of apiculture became more general; on the 11th day of July, 1923, the leading physician, Chartres, wrote a communication to the "Society of Colonial Medicine," at Marseille, and presented a case of phagedenic ulcers completely cured after 140 stings, applied in 14 seances, around the ulcer. He pointed out also that similar results had been obtained by Lautal, in helping Professor Gajoux and Dr. Vigne, treating and curing by apiculture an extremely grave disease, an elephantiasis, very deeply ulcerated, of a leg.

In the last days of the year 1923, Professor Boinet, lastly presented to the "Society of Colonial Medicine," two cases of lupus cured by the method of apiculture of Lautal. The persons attacked with this disease, which, as we know, slowly and relentlessly eats away the face, were entirely cured. One of the patients had been given 1,500 stings, the other 4,000. The newspaper "Le Matin," having published these facts on January 4, 1924, I wrote to Dr. Boinet to obtain from him some elucidation of this new therapeutics. He very kindly wrote me that the venom of the bee had a healing action in leprosy, phagedenic ulcers of hot climates, eczema, varicose ulcers and lupus, and that he had forwarded a relation of the matter to the Governor of Indo-China to recommend apiculture. As to the physical therapeutics of stings, he thinks we may ascribe it to the vasodilator effects, the phagocytosis of antitoxins acting upon the microbes, without establishing anything positive at this time, outside of the actual results.

It has seemed interesting to me to make known this particular branch of beekeeping and this new therapeutics, yielding such extraordinary results; may we not also expect an improvement in the relations of the neighbors with the apiaries of the beekeepers, when the curative properties of bee stings will be better known?

Perret-Maisonneuve.

After translating the above article, the editor concluded that it was sufficiently interesting to draw the attention of our beekeepers, so decided to write Mr. Ernest Lautal for additional information. In reply we received a very warm letter of which

we give extracts below. Mr. Lautal is not a graduated physician and, according to the very strict French regulations, cannot practice medicine. He terms himself "apiculteur-apipuncteur." The cures which he has performed by the use of bee stings have had to be certified by graduated physicians. Besides, as he does a great deal of gratuitous work, he has failed to follow the methods of some of our advertising quacks who show patients "before and after." His most wonderful cures were upon paupers, and gratis.

He wrote us:

"I received your letter and I cannot fully express the pleasure it has given me to correspond with you. I will begin by saying that I cannot refuse to grant anything you may desire which is in my power.

"I have known of you since my childhood, for I have kept bees since the age of 13. I was born in 1858 and bought the Hamet work in 1874. Between Hamet's books and yours I became a half-way beekeeper, having both box hives and movable-frame hives. The box hives make it easier for me to transport my bees, which I have been in the habit of shipping to the vicinity of Nice for the winter, so as to give them the benefit of the flowers instead of the snows of our mountains. I have shipped as many as four carloads of bees some 400 kilometres (250 miles).

"In 1890-91, I made a trip to South America, to Chili, Mendoza, and as far as Bahia; but I have never been in North America, and cannot speak or read English.

"I am sending you several photos of my patients, which you may publish; but please send them back to me after use. I would gladly send you electros of the cuts published by our newspapers, but have none on hand, and if I did they might be damaged in the voyage. I must say that I have never had a failure in the cures of the different diseases which I treat: eczema, cancer of the skin, leprosy, lupus, arthritis, ulcers."

Ernest Lautal.

The treatments consist in repeated seances, as many as 237, with totals of as many as 4,527 bee stings applied around the diseased parts. Mr. Lautal deserves great credit for his generous actions and persistence and also in his gratuitous treatment of paupers, who usually are worse affected by skin diseases.

We might add that where he is located at Marseilles, France, there is perhaps a better occasion to treat such diseases as leprosy than in other civilized localities, because Marseilles is a Mediterranean port where ships land from Asia Minor, Palestine, Egypt and northern Africa, all countries where those skin diseases have existed from time immemorial. The leper shown in the picture is so disgusting in appearance that we felt like washing our hands after handling the photo. We are sorry that Mr. Lautal was unable to send us the photo of this same man after cure.

## RECONCILING PRAYERS

By R. Beatrice Lane.

Bee enthusiasts exulting in the prospects of a luxuriant growth of star thistle,—thanks to the warm February rains—while the wheat growers are praying for its extermination, is the status of conditions in the north Sacramento Valley of California.

The big grain ranches, containing many thousand acres each, are gradually being cut up and sold in small tracts and planted to fruit trees. The orchardists all welcome the bee in their midst, but when the orchards are kept correctly cultivated that will be the death of the star thistle acreage.

When that occurs, like the red man before us in this state, we will be pressed back in the rugged foothills where crops cannot be cultivated. More fortunate than our predecessors, we can make bee grazing good in what are now waste places.

Why not get our Department of Agriculture intelligently interested in apiculture? Sowing the seed of fire-weed and other prolific nectar-producing plants in uncultivable areas would not require as much time and capital as that expended on replenishing our trout streams.

In the meantime may the grain grower appreciate the value to the community that is occasioned by allowing it to be the great source of supply for honey export trade.

We want both wheat and honey, so let us learn tolerance from the birds and the bees. Broadcast to the rancher that beautiful poem by Joaquin Miller:

"I think the bees, our blessed bees,  
Are better, wiser far than we.  
The very wild birds in the trees  
Are wiser far, it seems to me;  
For love and light and sun and air  
Are theirs, and not a bit of care.

What bird makes claim to all God's trees?

What bee makes claim to all God's flowers?

Behold their perfect harmonies,  
Their common hoard, the common hours!

Say, why should man be less than these,  
The happy birds, the hoarding bees?"

It would also be well for the beekeepers to remember this in their dealings with one another where sites sometimes overlap.

## Arizona Publishes a Honey Book

There is a little 15-page booklet put out by the Arizona Commission of Agriculture and Horticulture, Phoenix, Ariz. It gives recipes for breads, cookies, pies, puddings, ices, candies, preserves, jellies, and pickles, with a little general information on bees and beekeeping. It is interesting reading. It is evidently given out at the Fairs in answer to questions, in general mailing, and is used by the beekeepers themselves for distributing.



# SHALL WE POOL OUR HONEY?

By H. L. McMurry

PERHAPS the most successful honey marketing organization on the continent is the Ontario Honey Producers' Co-operative, Limited, which advertises the products of its members as "Beekist." Of course, if we have Kist oranges, Kist prunes and Kist raisins, there is no reason why we should not have Kist honey. Their general manager, Mr. Halsted, in a recent, very interesting letter, states:

"We are glad to inform you that our company has been a success right from its inception. We started off with 385 members and have nearly 650 now. (Increased to 725.—Editor.) The increase has come in almost voluntarily, as honey producers in this country are beginning to fully recognize the absolute necessity of scientific marketing, as they realize that the individual marketer is up against highly organized buying organizations, and further realize that the "dice" is loaded against them, when they come to market individually. They are also beginning to recognize that it requires united force to put on an advertising campaign and also to exploit new fields, and to stimulate the consumption.

"Production can be done individually, but marketing, to be successful, must be done through an organized selling agency owned and operated by the producers. We are exceedingly enthusiastic about our company and we are going to put it over, 100 per cent.

"We have a wonderful product, a product that the years have forgotten, and it is up to organized selling agencies to put our product on the proper merchandising basis that it should occupy, inasmuch as it seems, the last few years, there has been a battle of food stuffs which naturally will become a case of 'a survival of the fittest.'

"We have a product with more mental and physical energy than any other food produced in the world and all we have to do is to lay the truth before the consumer and there will be no such thing as over-production."

## Orderly Marketing

Everybody knows that the solution of our marketing problems can be stated in the one word—"orderly." It is the seasonable **dumping**, the periodical and regular **glutting** of the market that is at the bottom of the whole question.

What are the essential elements of orderly marketing? I believe I can state them in a few brief sentences:

1. Volume.
2. Uniform grading.
3. Standardized quality.
4. Advertised brand.
5. Expert management.

Small local co-operatives have lack of volume and always fail to produce results. A co-operative market-

ing baby is not an animal. Animals are born small and grow by a natural process, but a successful co-operative marketing organization must be "born big"—big enough to stand alone, big enough to work, big enough to fight!

For this reason we believe that honey marketing organizations should be formed on a state-wide basis with the set purpose in view of forming a National Selling Agency as soon as several state co-operatives can be built.

The whole trend of modern co-operative selling is along this line. Beyond doubt the most successful plan is what is known as the California or Sapiro plan, upon which the great prune, raisin, tobacco, cotton, potato, fruit, and many other large organizations are succeeding so wonderfully.

Manager Halsted makes the following recommendation in his letter referred to above:

"In my humble opinion it would be wisest for you to have a state organization with producers under a five-year contract. Where one state would not have say, a production of two million pounds, it would be wise to take in another state, as I think this should be the minimum amount to be handled by one company. Then, when these state organizations are all on a good foundation and properly functioning in every way, I would suggest a national central company which would have national control. We are seriously considering this in Canada as soon as some of the other provinces are as well organized as we are. The whole plan is as clear as crystal to us, and your company can be put over with a great success, if the right kind of men are behind it, men with optimism and 'peptimism.'"

After the question of volume has been settled, the large central organizations can readily bring about uniform grading. The product can be standardized according to quality. We go further, and standardize the package, making it uniform, convenient, attractive and economical. We must educate the public away from "glass." It is too expensive and causes too much loss. There is no more reason for putting honey in glass than there is for putting sardines or oatmeal in glass. What we must have is a **reliable brand** and an attractive, cheap package.

The large central association can also put on an adequate advertising campaign. National advertising which involves hundreds of thousands of dollars requires powerful financial backing. The Ontario organization has opened up a very profitable market for their Canadian Beekist Honey in Great Britain. Large quantities of American raisins and prunes

are sold in all parts of the world. A recent traveler told me that he saw beautiful advertisements of Sun-Maid Raisins in Egypt.

## Experienced Men Ready

We have some large and relatively successful co-operative honey selling agencies in Colorado, California, Texas, New York, etc. At present these independent associations are frequently found glutting certain markets. I believe that we have in these associations men who have acquired the experience that is necessary to organize our state associations and assist us to federate these into a great national agency. We will be able to find among these leaders competent managers. The thing we need is vision and faith and determination that it must and shall be done.

Now what have you to say? Let's hear from some of our men of experience. The only way to co-operate is to co-operate. We will never get anywhere if we don't start.

Wisconsin.

(Mr. McMurry is also secretary of the State Dairy Marketing Committee of Wisconsin. He has been making a very careful study of the whole co-operative marketing question and has collected very valuable information on all phases of co-operation.—Editor.)

## FLOODS IN THE SOUTH

We have correspondence from several people in Florida concerning the very high water which has caused much damage to apiaries in a number of sections.

E. G. Evans, writing from New Smyrna, Fla., says: "We had 35½ inches of rain in one week, and most of it fell in one night. My house floor is 20 inches above the ground, but we had 10 inches of water on the floor. As soon as I could see in the morning, I went to my bees and found the hives nearly covered. I put them on fences, chicken coops and other places to get them above the water. The bees came out and dropped by thousands. On every side the water was from two to three feet deep and running strong, so the bees drifted away. I lost heavily. All brood was below water. I have four light swarms left."

From Labelle, C. C. Cook writes: "It rained for three days and nights, raising the water to a depth of four to eight feet all over the streets. It was in all the homes and over the counters in several stores. We lost over 300 colonies and a large part of the fall crop. Hives are floating everywhere around here. Probably some have drifted to the Gulf of Mexico by this time."

H. H. Tussey, of Alva, says: "We had serious damage in this section. Many beekeepers lost nearly all they had. My own loss was 25 per cent. One neighbor lost 40 out of 50 and one 250 out of 600."



# THE INTERNATIONAL CONGRESS

## No. 4—After the Congress

By C. P. Dadant.

FOR many years, I had a curiosity to get acquainted with that country to the north, in the eastern provinces of Canada. To be sure, one cannot know much of a country by passing through it on the train; but in the case of northern Ontario, there does not appear to be much to see. For something like 800 miles on the Canadian National, it is granite hills, brush, small pines, and lakes without end. Probably some of those lakes are wide rivers with but little current; but either on one side of the track or the other there is some blue water. Fine country for hunting, it must be. Fine country for beekeeping, in some parts at least, it surely ought to be, for there are many flowering plants and shrubs along the track. The villages all seem to be either for the homes of the men who keep the railroad track in repair, or for lumber camps, wherever the timber is larger than a large sapling. Some of the names of the lakes show the French nationality of the discoverer; Lac Cache, Lac Seul, etc.

As soon as you reach Manitoba, the landscape changes; large level fields, prairies, immense crops of wheat and oats. The sweet clover begins to appear. I saw fields of 50 acres or more, of this plant, in full bloom, although they say they had a show of frost every month the past summer. One could smell this clover half a mile away.

I reached Winnipeg on Monday evening. Mr. L. T. Floyd, of the Agricultural College, was at the station and accompanied me to the hotel. Winnipeg has more than doubled in population, since I visited there some 16 years ago. At that time no one thought of the possibility of beekeeping in a country where no fruit may be grown. But the success of beekeeping is wonderful. Several thousand packages of bees by the pound are bought from the States every spring. And, by the way, I want to warn them against dishonest dealers. I was informed that some \$2,500 was lost the past spring, by ordering of an unreliable man in the South. I feared that the American Bee Journal advertising columns had been to blame, but when I got home, M. G. Dadant informed me that he had refused this man's ad and had also warned the Manitoba men against him. As a rule it is a mistake to buy from those who advertise too cheaply. The bonds proposed by the American Honey Producers' League should make dealers safe.

I must give credit to Mr. Floyd for his kindness. He accompanied me among beekeepers and we traveled together in his auto, some 200 miles, mostly on fine roads and between fields of immense crops.

There was to have been a beekeepers' meeting, but it was impossible

to arrange it to take place during my visit. But I met dozens of beekeepers. Their numbers are increasing rapidly and Manitoba will soon produce all the honey it can consume. Up to this time honey has been shipped there from the East. Messrs. Andrews and Son, of Winnipeg, reported to me having handled 68 per cent more bee goods in 1924 than in 1923, even in the face of the competition of five other firms. They have a good location and deal in seeds, agricultural implements, poultry goods and bee supplies.

On Tuesday morning, Floyd and I started on our bee trips. Perhaps the most interesting spot we visited



Father Francis, who has the Monastery in charge.

is the La Trappe monastery, at St. Norbert. For those who are uninformed concerning monks and monasteries, it is necessary to state that the Trappists belong to a religious order founded in 1140 by the Sire De Rotrou, in France. Their main rule is silence. They have a building especially to receive visitors, who are very well treated by them, but women are not admitted and, when visitors come, the ladies have to remain in the guard house outside of the gate. Everything is done with regularity, in answer to the summons of a bell. They get up at 2 in the morning to pray. They are called to meals by the bell and the end of the meal is also announced by the bell. We arrived there at 11 a. m., just as they were going to lunch, and it was necessary for us to remain in the guard house until the bell announced the end of the meal at 11:30.

We were welcomed and given a luncheon by the beekeeping brothers and fathers of the fraternity. The title of "brother" and "father" is given according to the rank of the member. Father Francis and Father

Anselme and Brother Joseph were all three French. As they had read our books, and were following our system of beekeeping, they were very glad to see me. They took us to the apiary and the honey house. They harvest large crops of honey, principally from dandelion, clover and sweet clover, with the addition of a number of wild fall blossoms. The apiary, as will be seen in the picture, has in its center a statue of Jesus-Christ. It is kept there for a purpose similar to that which the Russians intend when they locate "ikons" in their apiaries, as we have shown at different times, with the idea of getting divine protection.

We were also taken about the farm, to visit another apiary some 2 or 3 miles away, for they have an immense farm, of several thousand acres. Although there are, as I understand, 42 Trappists at the monastery, they also employ some 10 or 12 outsiders to work their farm.

They are very abstemious, eating neither meat nor fish, although they produce both. But they keep in good health and Father Francis, when I wondered at their frugality, said: "It is good for our health to be frugal and to work hard, but with regularity. Look at me." He is indeed a very healthy man.

They appeared to enjoy our visit as much as we did; it was evidently a sort of recreation for them, and when we left, it was with the recommendation of coming again. Although I was delighted with my visit, I would not for a minute think of imitating their abstemious life. But it must have some compensations in the satisfaction of duty performed.

They cut the comb honey into little blocks of a quarter pound, wrap it up in paraffined paper, after having thoroughly drained the running honey, and ship it to the trade far away. They also make excellent cheese, and as I praised the flavor, they volunteered to send me one cake of cheese and about 24 blocks of the comb honey, by parcel post, as samples of their products.

We also visited their bee cellar. They winter some 175 colonies in it, keeping the temperature at 40 degrees to 45 degrees. Like Mr. Tissot, they feed enough sugar syrup previous to cellar storing, to make the stock of food in the hive around 50 pounds.

That evening, back at the hotel, I had the visit of a newspaper reporter and of Mr. E. C. Keel, Vice-President of the Winnipeg Suburban Beekeepers' Association. I did not get to bed before 11 o'clock, pretty tired, but ready for more visits.

The following day, Wednesday, ended my trips in Canada, for the present. Mr. Floyd, whom I cannot too much praise for his kindness, took advantage of the fact that he had to go as far south as the frontier of the United States, to take me to two or three more apiaries and drop me at Emerson, the last town of Manitoba on the Great Northern.

We visited the "Maison St. Joseph, at Otterburne, an orphans'



The Monastery building.

home, kept by monks also, but not of as strict an order as the Trappists. Their apiary is large, crops good.

Their apiarist, Brother Trudel, explained to me why they kept the hives so far up from the ground, on very thin stakes, just as it is shown in the photo of the La Trappe apiary. It is on account of the ants, which are very dangerous in Manitoba, as they attack the bees in such numbers as to overcome them.

They have an observing hive, with some of the comb built crosswise, against the glass, so that one can see what the bees are doing when inside the cells. Brother Trudel told me of having seen worker bees store pollen in some of those cells, which was taken out the following night to feed the brood.

A few miles further, after a run through the prairie, during which we scared up some prairie chickens out of the road (a rare sight now in Illinois), we called upon a large producer, Mr. Bissonnette, living in the center of the village of St. Jean-Baptiste. He has about 100 colonies, and the interesting point is that this apiary came from a solitary swarm which he caught on the prairie nine years ago. All he did was to supply hives and foundation. He was harvesting about 10,000 pounds with the expectation of a couple of thousand pounds more. He also winters in the cellar, at a temperature of 40 to 45 degrees. He says it is the point at which they are the quietest, a statement which agrees exactly with my own father's experience when we practiced cellar wintering, years ago. We quit it because our winters are often too warm for comfortable cellar wintering.

At Emerson, I bid goodbye to my kind friend, ate supper there and got on the train. I had not noticed my entering Canada, 25 days previously, near Montreal, as there was no baggage examination in crossing the line, and no questions asked. But at Emerson, a U. S. Agent demanded my passport. I had none. Then he

wanted to know where I was born. I said France, of course. It was evident that I had "put my foot in it," as we say in slang, when I made that answer. He demanded my immigration papers. I had none, of course. I saw the time when I was about to be ordered off the train as an undesirable alien. But I showed him some checks with my name on, my Odd Fellows membership card and told him that I had been a citizen of the United States longer than he had, for he was only about 40. Finally he gave it up. Would it not be funny if they had refused to let me come in, when I have an American wife, seven American children, and eleven American grandchildren?

The next day, at Minneapolis, I spent the day with our good friend, Professor Jager, running around along Lake Minnetonka and looking at the bees. The following day I reached home, after 26 days of absence, with a big pile of correspondence on my desk awaiting my arrival.



The apiary and the statue of the Christ at the Trappist Monastery.

## OBITUARY

### E. F. Atwater, Meridian, Idaho

Just as we go to press, we learn of the death of E. F. Atwater, of Meridian, Idaho. He has for a long time been one of the outstanding figures in beekeeping, and had a very large establishment. The Journals are replete with his advice and writings. We are certainly sorry to have him taken from us.

On November 8th, he wrote that he was going to the Mayo Clinic, at Rochester, Minn., for examination but, since many go there for advice and attention, we thought no more of it. He leaves a wife and daughter, and we take this occasion to extend our sympathy to them.

### C. C. Brinton, Bloomsburg, Pa.

C. C. Brinton, of Bloomsburg, Pa., recently passed over the divide at his home. Brinton adds another to the many who have given themselves in the cause of the Great War. He suffered from gas poisoning and had difficulty in recovering at all after the injury. We regret to hear of this loss.

## Correspondence

I sure enjoy reading about the International Congress in Canada. Come on with more of them. I would like to have been there myself.

I have joined the A. H. P. L. That "Bonding the Breeders" is the very thing, I think.

I am thinking of starting queen rearing, season 1925, if I can get fixed out, and I will become a bonded breeder if I do.

The first thing I do after opening the A. B. J. is to see if the "Burr Combs" are there, and sometimes they are not, then I wonder why.

Bees didn't do very well here this year—too dry for them.

Honey sells from 20c to 25c per pound; could have sold a ton, I believe, if I had had it.

Geo. W. Jones, Milton, Okla.



# HONEY FOR AUTOMOBILE RADIATORS

By T. P. Gladstone Shaw and G. Leslie Robertson

The following article was received from the Province of Quebec and is an abstract of the studies and experiments of these students on the subject of honey as an anti-freeze solution. The original paper was published in Canadian Chemical Magazines. We do not wish our readers to draw conclusions from these statements, as we are anxious to give all views a hearing on the matter of honey in automobile radiators.—Editor.

## Introduction

Owing to the increasing publicity being given honey as an anti-freeze and to the importance of such a large market as its use in this field would create, the authors entered upon an investigation in an effort to determine the most suitable mixture to use for definite minimum temperatures. As this was a preliminary of actual commercial production of honey anti-freeze it will be seen that our results were not effected by biased opinions at the outset. Quite the contrary. In fact we were, in our own minds, thoroughly convinced of its worth and were vitally interested in obtaining data to make it a commercial possibility. At last, after exhaustive tests, we firmly convinced ourselves that it was quite unsuitable for the purpose.

We have gone to the trouble of writing up our observations for the benefit of others contemplating the sale of honey for this purpose. It is felt that were honey producers to allow the sale of honey for anti-freeze they would finally lose the confidence of the public, much to the detriment of beekeepers in general.

The results published in bee journals from time to time have not been reliable, owing to the unscientific nature of the tests. The authors have determined the viscosity or ease of flow compared to water; at various temperatures of the most suitable honey-water mixtures down to their crystallization points. Tests were made on the expansion of one mixture on crystallizing. Also extended tests under winter conditions in various makes of automobiles.

## The Freezing Point

This is the temperature at which the mixture freezes. Now on freezing water under the usual conditions we get a hard, solid ice. On freezing honey-water mixtures we get a compact mass more like packed snow. It has been argued that this mass is mobile enough to be easily moved for instance by the pump in the circulating system of some automobiles, again that the liquid can seep through it. Our experiments indicate that this is not the case. A tube in which a mixture has been frozen cannot be cleared by the lung power exerted by a strong man, neither is liquid forced through under these conditions. In fact it is difficult and sometimes impossible to force a piece of stovepipe wire through the frozen mass.

The temperatures at which freezing occurred were in every case too

high to be of any use as an anti-freeze when the car was likely to be exposed to zero weather. The actual freezing points are given in the condensed table.

## Viscosity or Ease of Flow

Just as we know that water flows more readily than honey, we find it flows more readily than the honey-water mixtures. Now since the cooling of the engine in an automobile is dependent on ready circulation of the liquid in the radiator, the authors set out to find just how many times slower than water the various mixtures would flow, and hence what effect this might have on proper cooling of the engine. Again, the lower the temperature the slower the honey mixtures flow.

To illustrate this point: A 1:1, by volume, honey-water mixture, at 32 deg. F., or the freezing point, flows about six times slower than water does at a few degrees above its freezing point. The same mixture at 16 deg. F. flows about twelve times slower. Another test showed that a 1 2-5:1 honey-water mixture at 32 deg. F. flows about eleven times as slow as water, while at 16 deg. F. it is twenty-four times and at 5 deg. F. about forty-four times as slow. Again, a 1 2-3:1 mixture at 32 deg. F. flows thirty-one times slower, at 10 deg. F. about 125 times slower than water.

These figures serve to show what a difficult thing it would be for an engine, even equipped with a pump, to circulate properly such mixtures.

The table gives more complete results.

## Expansion on Freezing

It is well known that when water freezes it expands, and with sufficient force to break open rocks and the foundations of our houses. Now, it has been found that honey-water mixtures also expand, but only about one-ninth the amount water does. That is probably the reason why some reports are received of having used honey mixers at very low temperatures successfully. Your radiator tubes were able to resist the pressure exerted where they could not stand that of water.

Here, also, an interesting argument has taken place. It is said that the thinnest bottles were not broken by the freezing of honey-water mixtures in them. That is quite possible if they are not full, or even if full, provided they were filled at ordinary room temperature. This is the reason: Honey mixtures first contract and continue to do so

until they freeze. Thus a bottle filled at room temperature would not be quite full just before it freezes, and the space left takes up a great part of the expansive effort. However, if we were to cool the mixture almost to its freezing point and then fill a cold bottle completely, I have no doubt that even stout bottles would be broken. This is the great point, and we may hear of someone whose weakened radiator tube failed him under like conditions.

## Overheating

Several cars of different makes were filled with mixtures as high as 2 volumes of honey to 1 of water.

In every case cars having pumps in the cooling system seemed able to keep sufficient circulation for cooling purposes and no reports were made of damage to the radiator due to crystallization.

With cars not equipped with pump the concentrated mixtures were decidedly unsuccessful and boiling took place, due to lack of circulation, if the driver was careless.

This boiling results in the evaporation of the water until the mixture becomes so concentrated that the heat of the engine candies the sugar, resulting in the formation of a thick, solid toffee in the bottom of the radiator. This is exceedingly difficult to remove; in fact, in several instances the radiator had to be removed and treated with live steam—practically melting the candy out. In one case a stick of candy was removed from the hose connections of a Ford. It was about 3 inches long, and of the diameter of the hose. In another case, an Essex using 4 parts 1:1 mixture thinned with one part alcohol, was found to contain an indescribable mass in the lower portion of the radiator, which effectively blocked circulation.

It would be decidedly unwise for beekeepers to place on the market a mixture which would act in this manner. This is the result of increased viscosity and probably in some cases frozen radiator tubes. A man who understands its limitations might have success with honey mixtures, but certainly not the general public.

## Summary

Basing our conclusions on carefully carried out tests made by unbiased persons, it is decided that honey-water mixtures are entirely unsuitable for use by the general public as an anti-freeze.

Table

Mixture No.	Per cent by Volume Honey	Sp. Gravity Baume—60° F.	Viscosity			Freezing Point Degrees F.
			Water—1 at 30° F.			
			32° F.	16° F.	10° F.	
1	10.	6.				
2	20.	11.				
3	30.	16.				
4	40.	21.				
5	50.	28.	6.	12.		15.
6	52.5	27.	9.	16.5	20.5	9.5
7	55.	28.				
8	57.5	29.5	11.	24.	33.5	4.5
9	60.	31.5				4.0
10	62.5	32.	31.	90.	125.	4.0
11	63.5	33.				



## IMPORTANCE OF TRADE MAGAZINES TO BEE-KEEPERS

By Frank V. Faulhaber.

The beekeeper who not only subscribes for a trade paper but reads and studies it thoroughly, is the one who makes the greater progress in the course of a year. He, not unlikely, is the beekeeper who receives better prices for his product; he learns how to dispose of it more readily; he experiences less difficulty with his bees; he performs his work more efficiently; he does, in fact, his work more enthusiastically. He, indeed, is the beekeeper who is getting real benefit and profit from the work of beekeeping.

Trade papers help beekeepers to succeed. There are some beekeepers, too, who would not need to point to their failure had they but procured some trade paper, and made proper use of it. The wise beekeeper not only reads the papers himself, he encourages his assistants to adopt the same policy. Surely they can make better headway, by means of the trade papers, as well as he. Also, whenever a beekeeper runs across an interesting article, that suggests particular import to a certain helper, he can mark it, later calling attention thereto. In turn, the assistants can do the same. That's what we call co-operation. Further, we need not stop here at all; let discussions follow; decide upon the merits of the new ideas. Object: Suitable action, all in the interest of progress, better beekeeping, making the work a real hobby, and a profitable one, at that.

Trade papers should be examined with regard to not only the straight reading matter; let not the advertisements escape, either. Sometime, later, you may want to revert to a certain advertisement; you have in mind the purchase of goods; but sadly you are unable to place the maker. Consequence, not unlikely; you cannot order those new goods; you cannot find out about them; something's gone wrong.

Remedy: Clip out all valuable material that in any way hints subsequent utilization. Then file, in such a way that you won't be put to a lot of trouble when you are prompted to scout. You may not want to retain each issue intact; certainly, however, some steps should be taken to preserve helpful subjects, news, advertisements, and the like. Small envelopes that can be provided for the retention of the various clippings won't take up much space.

It is not the wisest policy only to take a look at a trade paper when time palls. What matter it how busy you be; is it not to your interest to give attention immediately to the trade paper, and look for the fingers that point to PROGRESSIVE BEE-KEEPING? The foresighted beekeeper, also, will not merely read here and there, perhaps missing many things of value. From begin-

ning to end advertisements included, giving thought to every item, with the rest, that is the practice to follow.

Whenever the beekeeper reads an article presenting a subject that might ordinarily give growth to incredulity, let him not deny himself the possibilities. No; let him make up his mind to experiment; casting aside others' thoughts and experiences summarily does not indicate efficiency. Give yourself the benefit of the doubt. That is something worth while bearing in mind, whenever you read a trade paper.

New York.

(If the beekeeper who takes a bee magazine could see how often we have occasion to refer to previous issues, how many points of information are to be found in back numbers that even the editor has forgotten, he would want to save every number and have all bound in some convenient form. We have made a very exhaustive index to each year, since we have had control of the American Bee Journal and I do not know of any other publication in which the beekeeper can readily find a subject already treated as easily as he can find it in this magazine. Try to save the issues and file them and you will readily recognize their usefulness to you.—Editor.)

## FRESH WATER FOR THE BEES

By A. E. Lusher.

There are many good bee locations that cannot be used because the bees have no way to get water. A number of beekeepers have had serious trouble by having bees bother other people and their stock when seeking water. When you give bees water you should give them cool, fresh water, and that is where most beekeepers fall down, because the water gets hot and stale; so you can't blame the bees for not wanting to take it to the hive.

I have tried many different ways to water bees, but there was some drawback to most of them. I bought two large vinegar barrels, brought them home and filled them with clean water and let them set two days. The third day I poured out that water and filled them again, adding two tablespoons of lye to each barrel to sweeten them. Drain the barrels after three hours and drive all hoops tight. Then give them a good coat of paint and they will last for years. Don't knock out the tops of the barrels, for then the water gets sour and the barrels dry out. The small hole in the head is just right to fill the barrels if you use a large funnel, and the water stays fresh and clean.

Drill a hole in each barrel six inches up from the bottom, just large enough to push in an empty 30-30 rifle shell. The reason the hole is drilled six inches from the bottom is so the barrel will always have water in it, and also won't clog up with dirt. I found by driving out the cap of a 30-30 shell, then tying several

knots in the end of a cotton string about six inches long, I had a water dropper that would not rust and always worked just right. Of course, you should put the knots inside of the 30-30 shell and let the string hang down outside the barrel. To save every drop of water, I put a small tub below the lower barrel and put some pieces of old broken cement blocks or cement irrigation pipe in the tub, for the bees to suck the water from. It beats all your cork chips, sacks or wood floats, for the water is filtered and always fresh. Put the empty barrels in your truck, pour half a pound of salt in each barrel, then fill up with water. Take your shovel and two blocks of wood about eight inches thick and four feet long. If possible, set the barrels in the shade of a tree or building. If there is no shade, make some. The bees like cool, fresh water, and your barrels will also last longer. Put your tub of cement blocks in front and at the edge of lower barrel. Then lean a board from the tub to the drip string in the bottom of the barrel. Place two logs just back of this barrel and set the other barrel on top of the logs so the water will drip on a board and run on top of the lower barrel. By doing this you never waste any water. What drips out goes into the other barrel, then into the tub. I always put a block of wood over each hole on the top of the barrels to keep out the bees and keep the water from evaporating. This system will give your bees fresh, clean water for three or four weeks.

I have a galvanized tank with a honey gate that just fits in the back of my Dodge touring car. I place this tank in the auto, then fill it with a hose before going to work with the bees.

California.

## Poincare as a Beekeeper

The following is taken from "L'Apiculteur," which quotes "L'Echo de Paris" of September 25:

Mr. Poincare today presided at the banquet organized by the Society of Apiculture of the Meuse, at Verdun, to celebrate the enrollment of the one thousandth member. The former President of the Republic was accompanied by the Meuse parliamentary representatives, the General of the Verdun garrison, the Bishop, the Prefect, etc.

The President of the Society, Senator Pol-Chevalier, in a very fine speech, credited the efforts made by the Meuse beekeepers since the war, in rebuilding their apiaries. He recalled the fact that the Association was rebuilt rapidly, through the generous help of the beekeepers of Bouches-Du-Rhone, who extended to it a gift of 10,000 francs. Then he offered to Mrs. Poincare, who was present, the opportunity of joining the Association as its one thousandth member. Mr. Poincare made another speech in which he commended the work accomplished.

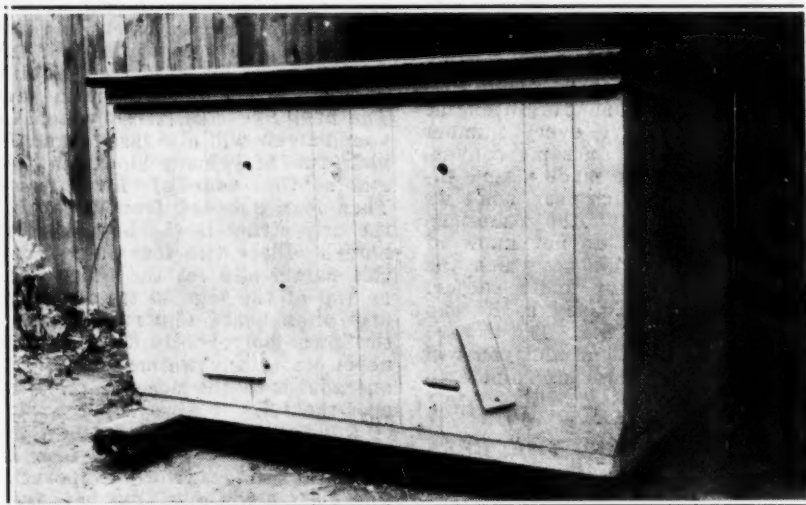
# OUTDOOR WINTERING IN THE PROVINCE OF QUEBEC

By Mrs. M. G. Lajoie.

A GOOD deal of ink has been spilt on the subject of wintering our mysterious bees and if success is not complete we are well on the way to attain it.

After reaping, adding together, then sifting the advice of several masters in the profession and visiting different brother beekeepers who have wintered outdoors for several years, we devised a case that gives us utmost satisfaction. Here is, in

planer shavings from obstructing the entrance. After December 15 the entrance is reduced to 1 or 2 inches, according to the strength of the colony. Our packing is 5 inches deep in the bottom, 6 inches to the back, 5 inches to the sides and the front 10 inches on top. The case also has an entrance corresponding to that of the hive that can be regulated at will. We find very little moisture. Weak colonies are protected by a di-



A winter case for two hives as used in the Lajoie apiary.

the hope of being useful to others, our method of wintering:

First of all, let us state that cellar wintering was a complete failure without the temperature dropping as low as 26 F. Always dutiful to advice supposed to be authoritative we removed our covers, replacing them by bags filled with from 3 to 4 inches of straw; today when we consider the wisdom of this we are astonished that our loss amounted to only 50 per cent of our colonies. We accidentally discovered that by leaving the covers on and closing the entrances to about 2 inches our loss would have been greatly reduced.

The only objection to our case, and a rather serious one when we have to encounter so many poor seasons, with the price of honey always so low, is the cost (\$12.50 each) for a two-hive case. Comparison of results forces us to consider them cheap.

When we case our 12-framed Langstroths they weigh from 80 to 85 pounds. We seldom need to feed in the spring. Ours is a well made case, as air tight as possible, that is easily taken to pieces. We pack early in October, keeping our covers on. Dr. Phillips' article in the January Gleanings on this subject was well "apropos." Our two hives rest on a support and a bridge in front of each with blocks that can be regulated according to weather conditions, generally left wide open till the 15th of December, prevents the

vision board. We experimented with a small nucleus, 2 frames of bees; they wintered finely. Of course we were not exacting enough to demand a strong colony for the main honey flow. In our country it is in the cold fall and spring nights that our case is a blessing. There is space enough

therein for a super and all strong colonies have one before apple blossom time. If we are unable to give all combs of drawn foundation, we give two frames of sealed brood with sheets of foundation between to prevent swarming fever.

Our greatest problem now is to get steady crops. Could anybody suggest a means?

## The German Bee Calendar

There has just come to our desk, Fischer's Imker Kalendar, 1925, published by Theodore Fischer, Kirchstrasse, 31, Freiburg in Breisgau, Germany. This Kalendar comprises 125 pages. The first half is devoted to a calendar for the 1925 year. Succeeding this are a number of valuable instructions for beekeepers, with a complete list of some 220 bee books published by this publishing house.

There is in it, we believe, the most complete list of bee magazines ever published in one list. There is given the names and addresses of publishers of over 125 different bee magazines and in possibly every tongue.

Germany leads in number of bee publications and is followed closely by France and America and the United States.

Copies of this calendar can be obtained by addressing the publisher, the price being 50 cents.

## Convention in Germany

We have on hand a new bee book chronicling the proceedings of the sixty-second convention of beekeepers of German languages held on July 25, 1924, at Marienburg, Germany.

The book is published in German and is compiled by Johannas Aifch and comprises 150 pages, giving complete details of the proceedings. The book is published by Theodore Fischer Company, Kirchstrasse 31, Freiburg in Breisgau Germany, and the price is sixty cents.



One row at the back of the Lajoie apiary entirely buried in snow.



# PACKING HONEY

## A Reasonable Effort to Avoid Damage to Shipments of Honey

By F. H. Hauck.

**M**UCH advice on this subject has been given to the honey producer in the past, most of it probably of some value. Our remarks are based on our experience as receivers of honey and honey packers who have graduated from the kindergarten class of the business. We handled, in 1923, about 2,000,000 lbs. of extracted honey and about 12,000 cases of comb honey. Most of the extracted honey we bottled and canned in small containers ranging from the 3-ounce individual to the 3-pound jar in the glass sizes and in 2½, 5 and 10-pound sizes of cans. It is possible, therefore, that our remarks, which are directed principally to the producer who ships his honey in bulk, should be of some value.

### Extracted Honey

Our friends in the State of California generally know how to pack extracted honey for long distance shipping. They use new 60-lb. cans and substantial cases to hold two cans, with a partition in the center of the case. We usually receive our shipments of California honey by boat (it is shipped from Los Angeles, through the Canal to New York City) and the cases are wire-strapped because the steamship companies require it.

### Use Heavy Cans

Producers should specify the weight of the tin plate used in the cans they purchase. Some five-gallon cans are made of tin plate entirely too light to carry 60 lbs. of honey. Most five gallon cans are made of what is known as 107-lb. plate. This means that a base box of 112 sheets of tin plate (sheets 14 x20) weighs 107 lbs. The gauge is about .012. This can is used for gasoline and for oil. A 5-gal. can of gasoline weighs slightly over 30 lbs., and 5 gallons of the average motor oil slightly under 40 lbs. Because cans made of 107-lb. plate are sufficiently heavy to carry from 30 to 40 lbs. of gasoline or oil is no reason why the same can is suitable for 60 lbs. of honey. Our opinion is that a 5-gallon honey can should be made of 135-lb. plate, which is .015 gauge material. A 5-gallon can made of this thickness tin plate makes a splendid honey container.

We have found in the East, by careful shopping, that 5-gal. cans made of 135-lb. plate could be purchased at a price of only a few cents a case more than the cost of cans made of 107-lb. plate, and they are more than worth the difference.

When the California Honey Producers' Co-operative Exchange first started to operate they placed some of their honey on the market in cans considerably heavier than the usual run. It was instantly noticed by honey purchasers and very favorably

commented upon. However, we don't believe they continued to use them. We only noticed them in their first season's shipments.

Even though the honey producer might never know the final destination of his honey, and who is going to receive it or handle it on its journey to the ultimate consumer, the mere fact that it is so packed to reach its destination safe and sound, will thereby bring a beneficial and proper blessing to our entire industry.

We have unloaded damaged carload of both extracted and comb honey and we know exactly the frame of mind such an experience produces in all who have anything to do with it, from freight handlers, truckmen, etc., all the way up to the railroad officials who at times have to be called in to adjust claims for damage. To use a crude though expressive remark often heard, they are "Off of honey for life."

### Use Substantial Cases—Wire Strap Them

The thickness of the lumber used in cases and wire strapping the cases are important. We have seen cases used by producers in the Inter-Mountain section, the sides, tops and bottoms of which were like veneer and the ends a scant half inch in thickness. We have seen carloads of honey packed in such cases shipped out of Utah, Colorado, Idaho, Wyoming and other states in this belt. Surely the producers in this section do not have to accept and use such cases. Perhaps they figure that because their honey crystallizes rapidly they can put 120 pounds of it in cases made of material that falls apart. We have unloaded cars packed in these cases which arrived in such condition that 50 per cent of the cases in the car would fall apart when being loaded from the freight car to a truck. In picking up these cases the bottoms would fall out or the ends split.

Should there be a possible chance of selling this honey for export it means it has to be re-cased at the seaboard before it will be accepted by the steamship companies.

This honey is not always solidly crystallized, and even when it is, it does not entirely prevent damage. We have seen cans so crushed in transit that solidly crystallized honey was pushed right out of the cans.

### Needless Damage

Just recently we received a car of splendid honey from Wyoming. It was packed in these flimsy cases, without partitions in them, and the cases unstrapped. The car was evidently bumped enroute. The honey was still liquid when loaded. When the car reached New York honey was dripping out on all sides.

The bumping of the car had caused pressure against the cases at the ends of the car. The cases were so weak and the cans of such thin tinplate that the cases squashed like so many marshmallows. The rest of it is an unpleasant story.

With the outlay of a few more dollars for decent cases and cans and a little labor and the small cost of wire-strapping the cases, a very unpleasant and sticky experience could have been avoided.

Our opinion is that cases should be made of ¾-inch ends and ¾-inch sides, tops and bottoms with a ¾-inch partition in the center of the case. The cases should also be wire-strapped.

### An Ounce of Prevention

We packed last season about 20,000 cases of honey in 2½, 5 and 10-lb. cans. The gross weight of these cases is about 75 lbs. We use wooden cases for our cans. Our glass is packed in corrugated paper cases. The case we use, for our cans, is the best case obtainable and we wire strap every case. If we use a case made of ¾-inch ends, in which we pack 60 lbs. of honey, net, and wire-strap the case, what excuse has the producer for putting 120 lbs. net, in a case made of one-half inch ends and veneer sides, top and bottoms, and no wire-strapping?

We are particular about what the recipient of that case of honey is going to think about it. If it reaches him with honey oozing out on all sides, as we said above, he is "Off of honey for life." Are we to assume that the honey producer doesn't care anything about what his customers are going to think of his product?

Wire-strapping the cases is really a simple and inexpensive precaution. We use a hand strapping machine that cost \$35.00, and the wire cost is 1 cent each. It requires two straps on a case of two 60-lb. cans at a cost of 2 cents per case for the wire, and they should be placed about 3 or 4 inches from the ends of the case. The strapping can very easily be done as the cases are loaded into the car, requiring only a little extra time.

If the honey is worth producing it is worth sufficient care and thought to insure its reaching the purchaser of it in good condition.

### Locality a Factor

Our remarks are not universally applicable, as, for instance, in the tupelo honey-producing belt. The producers in this section use a soft wood barrel holding about 30 gallons. Some use 50-gallon oak barrels. The barrels are better than the cans for this particular honey. The honey does not crystallize and it is produced in a section of the country where barrels are more easily transported. The soft wood barrels leak a lot and the purchaser of tupelo honey loses considerable because of soakage. When we packed maple syrup we always bought our supply packed in 50-gallon steel drums, which were returned and used for many years. As tupelo honey does not crystallize,



there would be no difficulty in draining these drums and returning them to the producers. True, there would be quite a cash outlay for containers, when they were first bought, but the drums would be good for many seasons.

Our remarks about cans and cases are also of no interest to those producers in New York State who use

the 160-lb. kegs. They are made of New England white pine. The honey when crystallized can be removed in one piece from the keg by removing a few hoops and taking out the head. The honey when crystallized does not stick to the wood, but can be removed clean as a whistle. These kegs do not absorb honey as the southern soft wood barrels do.

## THE RADIAL HONEY EXTRACTOR

By Aime Lafreniere.

I READ with great interest your account of the International Beekeepers' meeting in our good old city of Quebec, as given by you in the Journal.

Notes like these give one's mind a rest from the daily writings on aparian science, upon themes that have been discussed thousands of times and will certainly be again discussed thousands of times in future magazines; discussions on the prevention of swarming, on wintering, on feeding bees, on management, etc. We discuss endlessly the bee, an insect friendly to man at one end, his enemy at the other end. But as we progress and learn, it appears that the bee is now presented as the friend of man at both ends, since the redoubtable sting is at present considered by the medical fraternity as an almost infallible cure for rheumatism, lumbago and a host of other diseases formerly regarded as incurable.

I had the good luck to be favored with your visit at my home, on the 29th of August last. You came with Mr. Barbeau and became interested in my beekeeping laboratory. This was a pleasant date in my aparian experience. But you spent only a few hours with me and I should have liked to keep you a number of days.

At Quebec, I heard you discuss the thorny question of international trade, of friendliness between nations. It is too sublime a doctrine for the present day. The idea of social and international freedom is still a dream several centuries in advance of our present ideas, and the Golden Age is still very far away.

I also read the paragraph in which you mention the advantages and disadvantages of the radio-bilateral honey extractor which we discussed while you were here. From the conflict of ideas light emerges, they say. I reflected upon your criticisms and when I came home from Quebec I studied the question of possible improvements upon this extractor. Its lid or cover was faulty, for it did not fit exactly upon the circumference and permitted the passage of a small quantity of air when the machine rotated. This was a fault, for it prevented the existence of a void in the center of the machine. The radiating extractors draw the honey mainly by the central depression of the air, which helps to double the centrifugal action from the center of the apparatus.

I therefore had my machine's cover fitted thoroughly around the

axle, though it is open at the outside rim. I tried it again on the 15th of October, by putting into it 12 Langstroth size combs filled with honey. The result was quite different from the previous experience with an ill-fitting cover. At the very start, the air is forced outward from the center. There is a marked depression and the rarefaction of the air is more and more intense as the speed increases.

I first gave 30 or 40 turns to the machine, increasing the speed gradually and allowing the machine to stop of its own accord. I raised one of the sides of the lid to find out the conditions. I then witnessed an astonishing fact: The cells nearest the center, where the centrifugal force was the weakest, were the first extracted.

The central depression of the air is therefore the principal factor in the action of the radial extractors. The centrifugal force acts also, but it is weaker. The co-operation of the two forces contributes concurrently for the perfect emptying of the combs in a few minutes.

I believe in the future of the radial extractor. It is not yet perfected, neither are those with fixed or reversible tangents. Both kinds may still be improved.

The 32-comb radial model which I have is difficult to run by hand. It will require a motor. I am now having a radial extractor built, with only 8 Langstroth combs, to be run by hand. It will not cost any more money than a 4-frame stationary and less than a 4-frame reversible. It will do more work in a given space of time than an 8-frame reversible. It will not require any more strength to run it and will not take any more space in the honey room than a 4-frame stationary.

I believe this extractor will have great success and will sooner or later take the place of the old styles.

Ile Perrot, Quebec.

### Farmers' Bulletin 1424—Vinegar Making

This is new and contains directions for making vinegar from fruits, honey, maple products, grains, and molasses. It also has many valuable suggestions on after treatment—aging, clarification, filtration, pasteurizing, packing. Copies may be obtained by addressing the Office of Publications, United States Department of Agriculture. They are for free distribution.

## BEEKEEPING IN CHEREPOVETZ, RUSSIA

I beg your pardon for my bad English. I am a specialist of Bee Culture of the Cherepovetz Department of Agriculture, and the superintendent of its Experimental Apiary.

I have been the exponent from this apiary at the All-Russian and United Soviet Republics Agricultural and Industrial Exhibition in Moscow. In the Foreign Department I saw the Dadant's excellent wired foundation and other exhibits on Bee Culture and got there two copies of the American Bee Journal, October, 1922, and April, 1923, and several catalogs of bee supplies.

Our experimental state apiary is situated near the town of Cherepovetz (59 deg 7 min. northern latitude and 37 deg. 56 min. eastern longitude from Greenwich) and began this winter with 40 colonies, 30 in Dadant-Blatt hives with 12 frames, and 10 in hives of Levitzki system with 18 frames, the most usual at the peasant farms of this province. Our apiary exists from the spring of 1921.

Our 40 colonies are wintering in a room of unoccupied house. Our state apiary produces yearly about 1,000 pounds of brood comb foundation, which is given to the peasant beekeepers in exchange for beeswax.

The Cherepovet province, with area of 56,000 square versts, formerly a part of the province Novgorod, has about 10,000 colonies. There are 85 per cent of hives with movable combs, 55 per cent of Levitzki's system and 30 per cent of Dadant-Blatt. An average peasant apiary has from five to six hives, and the largest ones about 100 colonies. The most of the province's area is covered with forests (70 per cent). Large areas of forest were destroyed with accidental fires, that gave birth to a powerful growth of *Epilobium angustifolium* (our peasants call it "john-tea"), which is very abundant in nectar. Therefore, there is no wonder that in four districts of our province, the country teachers got, in 1895, from their 57 apiaries with 395 colonies, 15,920 pounds of honey, wax which cost 357 gold roubles, and besides 283 new colonies. The average income from each hive, spring count, amounts here to 17 gold roubles. We have had, this summer, a great deal of wild *Trifolium repens*. This last with *Epilobium angustifolium* and *Centaurea cyana* are the principal givers of honey-flow. In good years the best individual colonies give here from 160 to 240 pounds, the average time of the first bee flight is about the 23d of April, which corresponds with river ice melting. The beginning of natural swarming takes place about the 23d of June, and the time of placing the bees for winter is about the 15th of November.

We have very favorable wintering outside under the snow. Before the hive entrance we put an inclined small board and cover the hive with

snow. I kept my own hives during the winter of 1922-23 under the snow in the garden with full success. A colony, in Dadant-Blatt hive with 7 frames, consumed from the 5th of August, 1922, to the 9th of May, 1923, 17 pounds of honey and had

only 240 dead bees on the bottom board.

In our province there occur many bee diseases, especially American foulbrood, caused by *Bacillus larvæ*.

Beekeeping in Russia makes good progress now. A. S. Michaiheff.

## MEMORIES OF L. L. LANGSTROTH

No. 4

By C. P. Dadant.

**I** SHOULD not have written anything for publication about the Langstroth-Heddon matter, had this question been a private affair. But the support of the Heddon patent by Mr. Langstroth in the last years of his life was so openly discussed in both of the leading American bee periodicals, in 1888, that a mention of it can have no influence upon the matter. The Langstroth invention, which now covers the world in apiculture, is in no way belittled by the happenings of 1888.

I must, however, acknowledge that we took a very pessimistic view of the matter, just at that time. We know that forcible and well conducted advertising can sell goods that are of no value. Mr. Charles Dadant, especially, was so mortified at the support of the Heddon hive by our much beloved friend, that he directed me to offer Mr. Heddon the transfer of the revision work on the "Hive and Honey Bee," and all our rights, to him; as we did not doubt that Mr. Langstroth would approve of this course. But Mr. Heddon refused. Here is what he wrote us on May 7, 1888:

"In regard to the book matter, I have neither time nor nervous strength to attend to it at all. I have now on my shoulders more than I can do. Besides this, I should make no such expense as you have, were I publishing this or any other book, for when I did, I should never expect to get my money back."

Our expense in cuts for the new edition had been very large, for many of them were made in foreign countries. But Heddon saw this matter wrong, also, for the book has well paid for all the expense we put upon it, and it is still standing near the head in beekeeping information.

We were not alone in thinking that Mr. Langstroth's great age and his brain trouble had influence upon his action in recommending the Heddon invention as superior to his own. Here is what a leading beekeeper of Europe wrote concerning it:

Bertrand to Chas. D., May 27, 1888:

"I have just read the article of Langstroth in the American Bee Journal of May 2 on the Heddon hive. How bitterly you must feel this new attitude of Langstroth, just at the eve of the publication of his book. His letter to Cowan, which the latter showed me, before the publication of the letter, had annoyed me. But could anyone have foreseen such public praise of a hive which he has never tried himself? It is an

act of senility. He has been indoctrinated by Heddon."

At that time Mr. Cowan, editor of the British Bee Journal, was publishing a list of subscriptions to help Mr. Langstroth. He was then staying in Switzerland for his wife's health and wrote Mr. Bertrand to express his regret at the stand Mr. Langstroth was taking.

All sorts of inventions, all sorts of theories, more or less practicable, have been advanced for the benefit of beekeeping. Only a few years ago, a beekeeper offered for sale a positive swarm prevention, a secret. The price was \$10. But the beekeepers who bought the secret were so incensed at the inventor that the secret was soon published. It consisted of cutting the heads of all the sealed brood in the cells with the uncapping knife at the time when the bees were likely to make preparations for swarming. The job was easily performed and there was very little danger of bees swarming in those circumstances, for, aside from the trouble it gave them to draw out and throw away all the beheaded brood, it left them considerably weakened, decreased the warmth of the brood chamber and gave the queen a large amount of room in which to lay. Nothing, short of killing a part of the colony (which it was in reality), could have been more successful in preventing swarming. But the inventor of this marvelous process was in earnest; he thought his method excellent and was very much incensed at those who called him a "humbug."

Similar "cranks" may be found in all countries. It is only a few years since a French writer asserted with seriousness that the honey extractor was not practical, because the combs were usually broken out of the frames when an extractor was used.

The Heddon hive had some good points, as may be readily ascertained by any one who will take the trouble to read the article in support of it, published May 2, 1888, in the American Bee Journal; however, those good points were counterbalanced by others which prevented its adoption by the masses. But Heddon was certainly honest in his belief in the high value of the hive and thought he was doing the world a great favor in getting Mr. Langstroth to support it. Each one of us sees but one side of each question; that is why each country thinks itself and its products the best of all. Human nature is imperfect and we must not throw stones at others, for we all live in glass houses.

### Bees Drunk on Lime-Tree Nectar Attacked by Murderous Wasps

From Washington Herald (Washington, D. C.)

A tragedy of a late-flowering lime tree, involving a murderous attack by wasps on bees which were apparently helplessly drunk with nectar, has been described by Miss P. Gibbons, of Wolverhampton, England, who witnessed the incident.

The tree has always been a source of mystery, because when it has been in blossom a few days the ground beneath has been found, as Miss Gibbons says, "a shambles, strewn with the corpses of bees, some headless, some legless, while in other cases the whole of the thorax has been removed and deposited a few inches from the rest of the body."

This year the tree bloomed later than ever. Then, while the bees were at work on it, suddenly one dropped from the ground as though lifeless.

"We went up to it and touched it. The legs quivered slightly. Then as we watched, the end of its abdomen began to twitch. The bee struggled to regain consciousness, the twitching grew more violent, and at the end of two minutes it flew away straight back to the lime blossom.

"Another intoxicated bee fell down, and no sooner did it reach the ground than a wasp flew up and alighted on its back. There was a short struggle, during which the drowsy bee tried to sting the wasp. But this did not avail, for after several efforts the wasp stung the bee in the back of its abdomen, apparently killing it. The wasp then bit off one of the wings, then a leg, and then bit all around the bee's head and dragged the latter off, also.

"We saw several other murders, in every case the bee being too drunk to defend itself. Only twice during the afternoon did we see a wasp obtain honey direct from the flowers. In both cases the wasps fell from the tree intoxicated, twitching like the bees, and taking about two minutes to recover. Wasps in that state showed no inclination to fight."

These "murders" continued for about three days, and altogether Miss Gibbons found about 150 corpses of bees. She adds that apparently the wasps suffered no casualties.

Harold L. Kelly, Washington, D. C.

### Honey Balsam

I am sending you a sample of my honey balsam by this mail. It is another use for honey. Here is my formula for making it:

Take 8 oz. of extracted honey; heat it to 120 degrees; mix 8 drops of fir balsam with 8 drops of pure alcohol, or extract some lemon or vanilla to cut up the oily balsam; then stir the fir balsam thoroughly in the honey while it is hot.

Let it stand 24 hours, then stir it again, when it will be ready for use for coughs, colds and croup.

M. B. Pettengill, Kelliher, Minn.

(The preparation appears good and has a pleasant flavor. It is probably as good as any good cough syrup for coughs and colds.—Editor.)



# PACKAGE BEES AND FOULBROOD

By J. F. Weybright.

**B**EFORE the advent of the package business foulbrood was the exception. Now it is the **RULE**.

I do not mean to say that the infection is transmitted to any serious extent in package bees. The main trouble lies in the fact that the commercial honey producer can replenish his depleted stock so easily with package bees that it makes but little difference with him whether he has foulbrood or not. The consequence is that when he has a certain number of colonies affected, he forthwith orders package bees to replace them. Accordingly when the first honey flow comes in in the spring, when he should be busy cleaning up infected colonies, we find him busy with his package bees leaving his infected colonies to struggle along until he has nothing else to do, or until late in the season, until they have had opportunity to "broadcast the infection."

When the hoof and mouth disease broke out in California, recently, did they start shipping in cattle to take the place of the dairy cattle that were dead or infected? You all know what happened, and they stamped out the disease in one season. Yet that is what you are doing with your package bees—shipping them in right among the infected stock. If you had a herd of swine that were dying with cholera, would you start buying more hogs and bring them on your premises, to take the place of the dead and diseased, before you were

rid of the disease? That's what you are doing with your package bees.

Moreover, the package business has grown to such an extent that we now hear talk amongst the big producers of murdering all their bees in the fall to save wintering them, and stock up in the spring with package bees.

If such a degenerate, mercenary, barbarous and inhuman practice should obtain, I fear that Almighty God, creator of all things, the maker and giver of all good and perfect gifts, may send some withering curse to destroy the destroyers of His handiwork.

Wheatland, Wyo.

(It may be that our friend has some acquaintance who is trying the method he reproves. If so, he will be punishing his own self, for he will not only lose his bees, but also the purchased ones. I know of quite a number of purchasers of package bees; they do not buy them for replacing foulbrood stocks, but to enlarge their apiary.

Concerning the murdering of bees in the fall to replace them in spring with package bees, I do not believe it will ever be done profitably on a large scale. But as to the Creator punishing the man who brimstones bees, He has had a chance to do that for centuries, since the brimstoning of bees used to be the ordinary way of securing their honey. We are going in the direction of saving bees, not of murdering them.—Editor.)

"cleaning house," as we thought it was, thinking of dew or rain, while the bees were possibly just "ripening honey."

## Several Kinks

I have seen inquiries about how to clean pollen-clogged combs. If it is really necessary to do away with the clogged pollen, I soak such combs, or have soaked such combs, in sea water for 24 or 48 hours. Dry them and give them to the bees to clean, which they will do in short order. The sea water over the coral reefs here in the tropics is very salty, and leaves a white powder when it dries. The bees will eagerly clean out any comb thus powdered with salt.

Since I am in the writing mood, I can also mention that I have read that Professor Cook recommended the use of peppermint water for sprinkling when uniting colonies. I use the newspaper plan, only using two pieces of the thin paper found between foundation, instead of newspaper.

I have noticed and would recommend anyone using hard candy when introducing queens as mentioned by Mr. West, of cell-protector fame. When strongly flavored peppermint candy (hard) be used, the queen is always safely introduced. It seems that the queen, the whole hive, and the bees gnawing through the peppermint candy, all acquire this peppermint odor, and all's well.

Finally, I have never seen it mentioned what a saving it is to the bees when eight frames are used in a ten-frame super for extracting purposes. The bees save capping four sides of honey in each super.

Virgin Islands.

Axel Holst.

## RIPENING HONEY

I have read with great interest the editorial on Evaporation of Honey, in the July issue of the American Bee Journal, as well as the two related articles by Dr. Brunnich, and Dr. Wallace Park; and have thought that the following might possibly be of interest to you in this connection:

One morning, early, about four or five months ago, during a heavy honey flow, Mrs. Holst called my attention to a peculiar occurrence about one of our colonies here in town. It was a very powerful colony, with two brood chambers and four full-depth supers. By an accident a thin tile which supported it at the back, had slipped out, so that the colony leaned slightly backwards, not very much, or rather, not so much that I had corrected it, thinking of the enormous weight of the colony; but yet enough to make it tilt slightly backwards, instead of forward, as it ought to do. Out of the entrance of this colony, at the left side, came regularly, like pulsing, about every fourth second, a jet or spurt of water, thrown out from the inside of the hive, and very plainly visible, the jet passing over the bottom board, say two inches, and about one inch beyond. It was a most peculiar sight, because it looked as if the jet came from exactly the same

spot, and quite regularly. I thought first that dew had fallen, or rain, possibly, during the night, and with the backward tilt of the hive the bees were now clearing the bottom board of the water. But it might very well be that this is a method for removing water when ripening honey, and which would not have been seen if the hive had tilted forward as it ought to, when the water would simply have trickled out.

It should be very easy for our Government experimenters to try this out by tilting a few hives very slightly backwards during a heavy honey flow, and then watch the hives.

The jet was very powerful, and could be easily seen at a distance of six to seven feet, downwards toward the ground. It was not at all like the little spray or jet which can be seen when you save a couple of bees that have fallen into the water or into the comb buckets when they have been cleaned out, and which bees, when thrown on the ground, climb up to the tip of a grass straw and take wing from there, at the same time emitting a tiny jet of water. This spray, I consider, was about three inches long, and about as thick as a coarse thread. It looked as if it was being kicked out, or fired out through a little gun. We looked at it for about five minutes, and left the bees

## A Display Plan

The accompanying suggestion may be of benefit to some patron of "The American Bee Journal" and by and by following the idea to its elastic fullness could make several attractive changes for a number of weeks or, perhaps, for display at a fair:

Fill a large pan with very clear honey, sinking the pan so low as not to be detected, and arrange shredded grass-green paper around the edges. Hills may be constructed of candied, or granulated honey, by working it into odd shapes. An old-fashioned finger-post points the way to "Honey Lake Resort," where a number of bathing dolls are lounging along the banks of the lake. The house stands to one side of the road over which autos are traveling to and fro, would finish a very suggestive picture for advertising honey. Imagination can do much when it once gets started.

## Honey Fruit Salad

Thoroughly break up a half teacup of whole honey, and after preparing the fruits for the salad, pour over the honey, tossing it carefully through with a very coarse cooking fork so as not to spoil the fruit. A dressing is made of a half cup of canned or fresh cream to which has been added the juice of half a lemon, which must be well beaten.



# HOW TO STOP ROBBING

By C. S. Engle.

The old saying that "an ounce of prevention is worth a pound of cure" still holds good. To prevent robbing in the apiary is the best remedy. Robbing in an apiary is an indication of poor beekeeping.

Last fall I accidentally discovered a new method for stopping robbers. One morning I went to an outyard, where we expected to extract in a few days, to put on escapes and see that everything was O. K. The honey flow was about over at this time and the bees were inclined to rob if the opportunity offered. Upon arriving at the apiary I noticed many robbers busily carrying honey from several hives. The colonies being robbed were queenless. I closed these hives up tight and as there were many robbers in them I decided to pour in some carbon bisulphide, to kill them. This I promptly did; then went on about my other work.

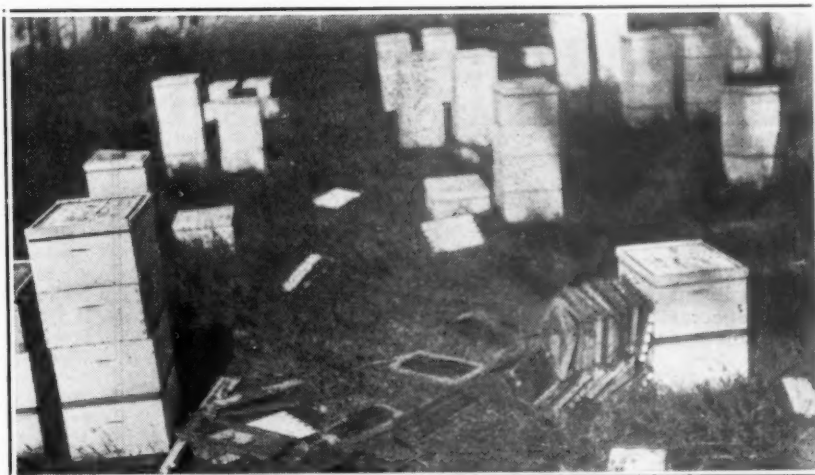
After a few minutes I noticed thousands of robbers trying to get in the hives that I had just closed. Wishing to kill all of the robbers possible, I made a big newspaper torch and singed the wings of hundreds of them. I would not have followed this form of procedure had my memory been as good as my "forgettery." All went well until I came to the last hive. I had no more than applied the torch when there was a terrific explosion which sounded as though Jack Johnson and his sister, Big Bertha had both spoken at the same time. Then I noticed that instead of standing in front of a colony in a hive I was in front of a bunch of naked

combs. Then there was a shower of bee supplies, K. D., all about me. About this time I realized what had happened and quickly I glanced in all directions to see if the "fool killer" was headed my way. As I did not see him I gathered up the remains and went about my business. The robbers seemed to have had enough punishment and quieted down.

I believe in heaping coals of fire on an enemy's head, so I am recommending this method for stopping robbers, to any beekeeper enemies that I may have. Had there been anyone with me to see the pieces of hive bodies come down around me, with some of the pieces on fire, they would understand about the coals of fire.

Sioux City, Iowa.

(Although in organized robbing, one feels very much like destroying every robber bee, one must remember that every bee will become a robber, if given the opportunity. Some bees are at it so long that, as Mr. Langstroth wrote, "they are the 'Jerry Sneaks' of their profession. Constantly creeping through holes, and daubing themselves with honey, their plumes assume a smooth and almost black appearance, just as the hat and garments of a thievish loafer acquire a 'seedy' aspect." There is little loss in killing those bees, but if the organized robbing is stopped, nine-tenths of the robbers will again resume their peaceable pursuits. Stopping robbing promptly after it begins is a very important need.—Editor.)



There was a shower of bee supplies all about me.

## Sweet Clover Seed Crop Expected to Exceed Last Year's

Sweet clover seed production is expected to be much greater than last year, because of the better yields per acre in many sections and the greater acreage. A larger acreage for seed will be saved in practically every district except the eastern half

of North Dakota, which is the heaviest producing section in the United States. Here the acreage is only 5 per cent smaller than last year.

Opening prices are \$1.00 to \$1.50 more per 100 pounds (clean seed basis) than last year. In the leading districts, an opening price of \$8.00 to \$9.00 was offered.

## Foulbrood Eradication in Mississippi

We are in receipt from Mr. Clay Lyle, Inspector in Mississippi, of the information published below, concerning the eradication of foulbrood. This is important, since Mississippi is one of the states from which bees are constantly imported into the North. We trust they will continue to watch the apiaries by "careful inspections" for several years to come, until the disease disappears entirely from the country.—Editor.

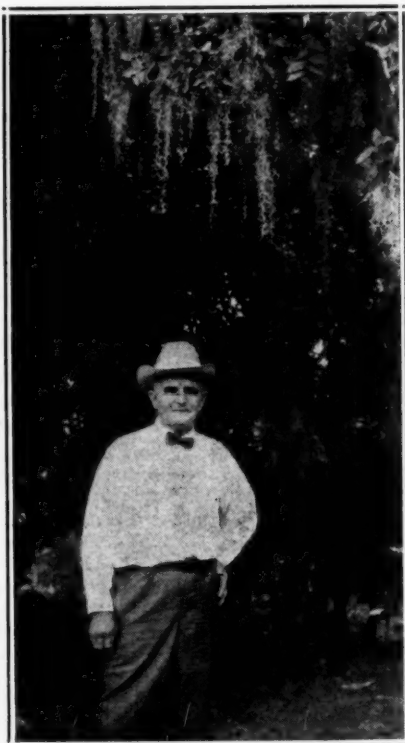
"Among the important achievements reported at the recent annual conference of the Mississippi State Plant Board was the eradication of American foulbrood. Fortunately for Mississippi beekeepers, this disease has been confined chiefly to a few counties in the western part of the state, with only one infected county in the eastern part. However, in the infected apiaries heavy loss has occurred in some cases. In 1920, one large apiary in Washington County was practically destroyed by it, causing a loss of about \$5,000.

"The disease has been apparently eradicated this year through the persistent efforts of inspectors of the State Plant Board and the co-operation of the owners of the infected apiaries. Large numbers of diseased colonies were found in several apiaries early in the summer, but the inspectors urged and assisted the owners in treating and burning them until the last colony had been cleaned up. Careful inspections will be made early next spring and throughout the summer, and if the disease should reappear it will be stamped out promptly.

"Considerable publicity has been given to the eradication work accomplished this year, and beekeepers all over the state are being urged to co-operate with the Plant Board in effectively preventing the introduction of American foulbrood into Mississippi in the future. One of the best beekeeping counties of the state barely escaped infection of American foulbrood during the past summer from a diseased apiary brought in on a truck by an itinerant beekeeper from a northern state. All shipments of bees entering Mississippi by freight or express are promptly inspected by the Plant Board, but in order to protect the state against apiaries moving by truck or wagon, the co-operation of local beekeepers is necessary. Hence, the Plant Board is urging all beekeepers to report at once when new bees are brought into a community, especially if the bees are from another state." Clay Lyle.

In eastern North Dakota, 52 growers reported that they would harvest 4,950 acres of sweet clover seed, with a yield per acre of 262 pounds. Close to a million pounds of seed were shipped from South Dakota last year and this year's crop is expected to exceed that by 10 to 20 per cent.

## FOLKS WORTH WHILE



Henry Brenner.

### A CANADIAN IN COLORADO

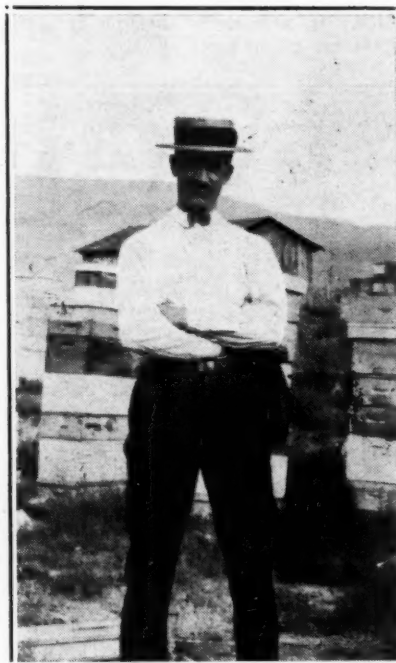
The present State Apiarist of Colorado, R. G. Richmond, is a man of wide experience. Prior to the great war he was content to plod along with his bees in the Province of Ontario. He had not finished his college course when the war upset all his plans and he entered the service. He spent five years in France and was in the thick of things long before Uncle Sam got into the mixup. When it was all over he returned to Guelph and finished his college work. Later he went to Texas, where he spent a year teaching bee culture at Texas A. & M. at College Station. When Boggs resigned his position as bee inspector in Colorado, Richmond was selected to fill the place.

In Colorado they have a system of county inspectors who are appointed by local officials but who are under the supervision of the State Apiarist, who has headquarters at the College of Agriculture. Colorado is a state of extensive beekeeping interests in the hands of men who are good beekeepers. Richmond is taking much interest in other problems beside bee disease, including the protection of bees from poisoning by spraying.

### WIDELY KNOWN TEXAN

Henry Brenner, of Seguin, Texas, is the kind of beekeeper that one loves to meet. He not only knows bees but he knows a lot of other interesting things as well. Brenner is a beekeeper and horticulturist whose efforts for better things have been appreciated by his neighbors. So much have they appreciated his work that the State of Texas has taken over his experimental plots to establish a local experiment station. Next to bees, fruit growing holds his interest, and he is doing much to make grape growing practical in his neighborhood.

While Seguin is his home, still he finds the lure of the tropics irresistible, and now and again he spends a year or two in Porto Rico or Santo Domingo, where he continues his investigations of beekeeping and other subjects which hold his interest. Queen rearing has a special fascination and numerous contributions to this subject from his pen are to be found in back issues of the American Bee Journal and other bee publications. The picture shows him under a live oak tree, festooned with Spanish moss in his apiary.



R. G. Richmond.

# THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

## DEAD BEES AT ENTRANCE

Am sending to you in a small package two samples of dead bees from our apiary.

1. I examined one day and found that the bottom of the hive was very damp. I took a small tool and began dragging the dead bees from inside the entrance of the hive. Many of the bees seemed to be as if water-soaked. I raised the cover and found that they were all dead. I examined the frames and found no moth, so thought it must be some disease.

2. I examined and found quite a number of dead bees which I moved from the entrance, which are from all stages from larvae to bees, which you will notice by the sample. I have two combs on this order. These bees were all hived this previous June in new hives and were all extra large swarms. They do not show signs of moth, as I raised the cover and there were quite a number of live bees in No. 2 hive. I do not understand why there are bees in all stages in the second and not in the No. 1 hive. There is a good surplus of honey in the three hives. Hive No. 1 is several rods away from the others.

If this is disease what is it, and what can be done to save the other colonies?

Is there anything that can be done to save the rest of the bees in the latter class?

ILLINOIS.

Answer.—In the first place, I must tell you that bee moths do not trouble colonies in winter. Either the colony is worthless in fall and the moths invade it, so that it dies before winter, or else there are not moths enough in it to do any damage. A colony is never killed by moths. The moths simply take what remains of a worthless colony.

No. 1 appears to me to have suffered from unhealthy honey, probably honeydew. It often happens, when the honey is unhealthy, that there is an extra amount of moisture produced and the bees appear soaked in it.

No. 2 evidently must have reared brood quite late and so some of the young hatching bees died shortly after emerging. This is unusual. Probably your bees harvested late honey, perhaps fruit juices, which are very pernicious in wintering.

Breeding in early winter is unusual and not very much good. But I see no disease apparent. If your colonies are very much weakened, they may die before spring. Shelter them the best you can and do not disturb them in cold weather; that is about the best advice I can give you.

## QUINBY, DADANT AND JUMBO HIVE DIFFERENCES

I am tardy in sending my appreciation of your story about the International Convention. As the children say, tell us some more. Your writings are always enjoyable.

There are some points I would like to clear up in my mind about the Dadant hive. Did Mr. Quinby ever make hanging frame hives, or is the hanging frame of his size rightly called a Dadant frame? I understand his first frames were the standing style as used by Mr. Ellwood. I understand from you that all frames commonly called Jumbo are rightly called Dadant Modified frames. It is only right that these points should be kept clear, and if you do not mind giving me a little history, and better still, references where I may look it up in early volumes, I will appreciate it very much.

ONTARIO.

Answer.—Yes, Mr. Quinby made hanging frame hives, just on the pattern of the

Langstroth, except as to the size of the frames. In his book "Mysteries of Beekeeping," 1866, (newly written throughout), he wrote, page 66: "To the Rev. L. L. Langstroth belongs the credit of introducing to us the hive that will accomplish all these desirable results. Several others have given us hives on the same principle, which effect the same purpose." Page 68 he wrote: "I will give a full description and manner of making one, modified by myself from Langstroth's, being much more simple. But he claims that it is not changed sufficiently to be released from his patent. I am not lawyer enough to decide the point, nor whether the other patents for movable combs are infringements upon his. . . ."

Chas. Dadant adopted the Quinby hive, from his description. It was an 8-frame hive. Then he made some changes, retaining the size of the frame, increased the hive to 11 frames and described it wherever he spoke of movable frames. It was in Europe that they first called it "Dadant hive" for he always had called it an enlarged Quinby hive.

The Standing Frame Hive of Quinby was devised later. It was claimed to be an improvement, but we tried it and did not like it at all. It was evidently not much of an improvement, for very few use it at the present day. But the fact that Elwood, Hetherington and other great producers used it should make it worthy of recognition. Personally, however, I believe that the success of Elwood and Hetherington was due, not to the standing frame, but to the large brood chamber. The standing frame was not mentioned by Quinby, in any book. It was only after his death that his son-in-law, L. C. Root, published "Quinby's New Beekeeping," 1879, and in that book the Quinby standing frame was described. We never used but one hive of that style.

The "Jumbo" frame was inaugurated by the Roots when the size of hives and frames was discussed in Gleanings, by A. N. Draper, in the Nineties, though I cannot find the date. It was on the recommendation of the style which we had urged, paragraph 307 of "The Hive and Honey Bee," to use a frame as long as the Langstroth and as deep as the Quinby. Such a frame was used and is still used in Europe under the name of Dadant-Blatt, because Mr. Blatt was the first man to follow our advice given in the French edition.

So, aside from the number of frames which may be greater or less in either hive, the principal difference between the Dadant-Blatt or Modified Dadant hive and the Jumbo is that the latter has only 1½ spacing between the frames from center to center, while the Dadant hives of either sort have 1½ spacing. A small difference apparently, but an enormous one in regard to swarming, as the greater space works for swarm prevention. So, if you wish to know whether a hive is a Jumbo, make sure whether it has the narrower spacing.

## DYSENTERY

I would like to know what I should do with one of my swarms of bees, as I think that they have the diarrhea. I find that the entire front of the hive is covered with a brown deposit from the bees. And I even find a few spots in the hive. The bees are never quiet and keep coming out of the hive. I also have lost a lot of them from this one hive. The rest of the swarms are all right.

What can I do for them and what do you think causes it? I only fed them pure honey in combs made by them.

MINNESOTA.

Answer.—The colony in question must have gathered some honeydew or fruit juice, late in the fall, unknown to you. But there are other possible reasons. For instance, the colony may have been disturbed more than the others or it may be weaker. Either of these reason would cause it to suffer more, because they eat more honey.

What they drop cannot be called diarrhea unless it is liquid; but in any case it is an excess of discharge, which they are unable to retain. There is not much that you can do, except leave them quiet until warm weather comes. The more you will disturb them, the worse it will be.

## INTRODUCING—CLOVER

1. I requeened 17 colonies the last week in August and lost 6. There was a good goldenrod flow at that time. In your answer to question asked by "Iowa" on page 475 of October Bee Journal, you refer him to an editorial in the May number. I would like directions given there as I wish to requeen several colonies next August.

2. I wish to sow some Hubam clover for my 35 colonies; would not cut it for hay but leave it till frost killed it. How large a piece would I want to have them make a surplus? The little patch I had this year came into bloom just about the time the white and alsike clover flow was over.

MASSACHUSETTS.

Answers.—1. I am sending you a copy of the May number of the American Bee Journal, concerning queen introduction and we will here reprint the instructions given there, so that others may get the information if they were not subscribers or failed to preserve the back numbers. Let me take advantage of this, to insist on the value of back numbers of the American Bee Journal to all subscribers. The index at the end of the year (see Dec. number) is of great use to find what you wish. Each year of the American Bee Journal is as valuable as any bee book. I know it because I have it from the first number and find it exceedingly useful.

Mr. J. F. Diemer was not fully satisfied with the directions usually printed upon queen-shipping cages and he and the editor put their heads together and devised the following to be printed instead:

"A colony will accept a strange queen provided they have neither laying queen, virgin, nor queen cells. Remove the old queen, if possible, just before introducing the new one. Remove all the bees from her cage, leaving her alone. Place the cage immediately on top of, or between the brood combs, wire side placed so the bees can have access to the screen. After two days, remove the cork from the candy hole, put cage back in hive, so the bees can eat the candy and release her. If there is a great honey flow, do this one day earlier. DO NOT DISTURB THE COLONY FOR FIVE DAYS, as robbers might catch queen to be killed.

"Shade hive well. If there is no honey flow, see that they have plenty to eat, and contract the entrance to an inch or so. We do not guarantee safe introduction, but if



directions are followed, success is almost certain. If you fail, write me at once."

Mr. Diemer says that "a man who cannot introduce a queen with this method should quit keeping bees."

2. Just how many acres of sweet clover it takes to make a crop for 35 hives is guess work. I certainly don't know. I can make the guess that it takes not less than an acre for each colony. A hundred acres would be still better. You must not only plant sweet clover, but urge your neighbors to do so. It is a good crop and no one will be sorry of having done it.

#### RESTLESSNESS IN WINTER

We have 3 colonies of bees all packed in winter cases, with about 6 inches of dry leaves on bottom and sides, packed down tight, and about one foot on top of inner cover; no openings on top at all. We first put leaves in inner cover and old coats and bags with the leaves in over them. Now one colony is very restless; you can hear them buzz by listening in front of the hive, and if I hold my hand at the entrance I can feel the heat. Sometimes I can see the steam come out of the entrance. All three are packed in two 10-frame hive bodies; the top of one is full of honey. This same colony acted the same way last winter until they were all dead except about a handful with the queen last spring. A year ago I fed each about 10 pounds of sugar syrup before packing. I thought the syrup might have had something to do with it; so this fall I did not feed any, and it is the same way again. I am sure the entrance is open in good shape, because I can look in a little way and see a few bees at the entrance; if it is not too cold a few will come out and fly around and fall in the snow.

#### MICHIGAN.

Answer.—Your colonies seem to be properly packed, except that I would have removed the inner cover before packing, so as to give opportunity for the moisture to escape into the packing above. In this way there would be no steam forming so as to come out of the entrance as you state.

You speak of only one colony as not wintering well. The fact that they make a noise and fly out would indicate that there is some cause that is disturbing them. Perhaps it is where it may be jarred when people pass by; perhaps you look at them too often and stir them up. They must be left in perfect quiet. If there is no disturbance, I do not believe that their activity would be injurious to them. A few bees lost on the snow do not mean bad wintering. Their loss during the previous winter may have been caused by unripe honey or honeydew. It is certainly not due to too heavy packing.

#### WINTER ACTIVITY

What makes my bees so active? I am a beginner and bought two hives in May; got 33 sections of honey from one and 28 from the other. These hives weigh 80 or 90 pounds and the bees are quiet. They are packed in 6 inches of leaves.

But I bought 5 new hives of bees in November. I brought them home; they are very heavy and in double-wall hives. They seem very active since I brought them to my place. If anyone goes about them they come out. I don't know why. They have plenty of food in the hive and cannot need anything. What is wrong?

#### CONNECTICUT.

Answer.—Your bees are active evidently because you handled them lately and they are very strong and populous. I have often seen colonies which you could not jar in the least without causing the bees to show themselves at the entrance, even in the coldest weather. This is certainly a good sign. If they have plenty of honey, do not disturb them in the least, for every time you disturb them you cause them to stir and consume more honey. Besides, in very

cold weather, they are likely to lose such bees as wander away from the cluster and get chilled. Bees should be left alone in cold weather.

#### MISCELLANEOUS

1. I covered my bees with some old gunny sacks and a canvas. Now they're covered with snow. Is this all right? Must bees have plenty of air in winter?

2. If the bees die, can I buy a queen and some package bees to replace them and still have strong colonies? Will they gather any surplus honey? Will they swarm that season?

3. I intend to have my father make me some hives, as he is very handy at carpentering. Would you advise me to try ten-frame hives? I am using eight-frame hives. Would I get stronger swarms and more honey from ten-frame hives?

4. After I received the first swarm, two more swarms came a few days later. There was a cupfull of bees in one and about two in the other. I returned the smallest one first, but I could not find the queen. When I returned the second I found the queen easily. I killed her. Did I any harm or good doing it? It did not seem to hurt the colony any. They were very healthy when I looked at them last.

#### MONTANA.

Answers.—1. Snow will not hurt the bees as long as it does not melt and again freeze to ice. Be sure and remove it when it begins to thaw much.

2. Yes, you can replace your bees by buying package bees and queens. The combs and hives make about half of the value of the entire colony. As to whether they will gather surplus or swarm, I could not answer, even if they were full colonies, for it would depend upon the season.

3. Yes, have ten-frame hives. If you have prolific queens they will raise more bees in ten combs than in eight.

4. Usually there is a queen left in the hive when the bees swarm, but sometimes there is not. It was all right to kill the queen if there was one left in the hive, which was probably the case, since you say they did well.

#### MAY DISEASE

1. I have several swarms of bees in which a large number of bees seem to be sick; their bodies look like they were covered with oil, the fine hairy covering over their bodies is gone. This started with one swarm last spring and several had it by fall. I requeened the first one in September, but they have not had time enough to show any change. The first swarm lost bees so continuously that they laid 2 inches deep in front of the hive all summer. They made 48 boxes of comb clover honey, while my best ones made 120. I have enclosed a sample of these dead bees. Perhaps you can tell me what the trouble is.

2. Do you know of any southern location or state where they have no American foulbrood?

3. I have had trouble with European foulbrood and cured it as it came. Have been in the bee business 10 years. I like the American Bee Journal very much.

#### WISCONSIN.

Answers.—1. The disease to which your bees are subject has been described under different names. In fact there are several diseases of the adult bees, none of which appears very easy to cure. But luckily they generally disappear during the summer. I believe that requeening is probably the best way to do away with the disease, although it would appear that feeding the bees on medicated food would be good. Some of the Italian beekeepers succeeded in curing a similar trouble, by giving their bees syrup containing tonics, such as anise, ginger, lavender, etc. But you will probably succeed best by changing the queen.

2. There are many locations all over the United States where no American foulbrood exists, but it would be out of the question for me to give any particular spot as free.

Better have the State Apiarist or State inspector to do that, just at the time when you wish to buy bees.

3. European foulbrood is not difficult to cure. Usually it disappears by keeping the queen caged for a couple of weeks and feeding the colony. It is only when the colony is quite weak that the disease continues.

#### FEEDING BITTER HONEY

I. I have 11 stands of bees in 8-frame hives. Some of the honey I took off in June was bitter. I have about 10 gallons of it; I intended to feed it to them this fall, but they had the lower hive body full of honey. I have no extractor; how and when could I feed this honey to them next spring so they will not store it in the super? Eight of my hives made in September 2 supers each of very fine honey, mostly from goldenrod. I put it in pint and quart fruit jars in the comb and filled up with strained honey. I can sell it best that way, the quarts for 60 cents and the pints for 30 cents.

2. I am much troubled with swarming. I have tried the 2-story plan but they swarm just the same when the time comes; plenty of room does not help much. The only way I can keep them from swarming is by going over them once a week, in May and part of June and cut out the queen cells. It is a lot of work, but it pays. All hives that swarmed made no surplus this fall. I have yellow and three-banded Italians.

3. What do you think of the Carniolan

#### ARKANSAS.

Answers.—1. It is difficult to say what to do with that bitter honey, if you have no extractor. The weed that gives you that bitter honey is probably the *Helenium tenuifolium*, called "bitter-weed." If you have colonies that are short of stores in early spring you can feed it to them. They will take it out of the combs, by putting it on the sides, or in a super. If your bees are not short and you don't want to buy an extractor, you had best keep it. It will be needed some time and is probably very good feed for them. Keep it in a dry, warm place, not in the cellar.

2. Swarming can hardly be prevented with 8-frame hives, and cutting out queen cells does not always do it. Better have larger brood chambers; keep only young queens, have no drone comb, and give plenty of shade and lots of ventilation in hot weather.

3. The Carniolan bees are very good workers, but they swarm awfully and their color is against them, as you cannot detect easily the mixtures with the common black bee. Better keep Italian bees.

#### SWEET CLOVER PLANTING

Being a beekeeper by profession and not knowing much about plant production, I would like to ask a few questions concerning Hubam clover. When should it be sown, spring or fall? How many pounds to the acre? Must it be sown with a nurse crop? If so what would be best to sow with it? Would it be possible to sow without nurse crop? What is your opinion as to acreage to be sown for 100 colonies of bees?

#### MISSOURI.

Answer.—Sow in early spring. Twelve pounds per acre. Sow with a nurse crop, wheat or oats. If you sow it without nurse crop, it will be likely to be destroyed by weeds. We would not think less than 100 acres would be sufficient for 100 colonies of bees. The more the better. Some beekeepers who have no land manage to get their neighbors interested and secure hundreds of acres. In the northern states like the Dakotas, and the provinces of Manitoba and Saskatchewan, farmers are exceedingly well pleased with the Hubam and it has come to stay. It is a wonderful soil renovator.

## THE GLOSSOMETER

By N. P. Kunnen.

Studious beekeepers, at different times, who watched the results of the honey crops, have noticed a difference in production in hives of the same race, with queens similarly prolific, and having about the same number of field bees at the time of the honey crop, even when living in hives of similar shape and capacity.

Noticing that some bees worked upon red clover blossoms with deeper corollas than those of white clover, they took it for granted that some bees had longer tongues than others. It became necessary to secure some apparatus for measuring the length of the tongue of bees.

In 1881, Wm. Wankler, born at Heilbronn in 1855, and now living at Sulzburg, Baden, exhibited an implement for this purpose at the meeting of the beekeepers' association at Winsheim. Mr. Bok, now editor of the "Biene und Ihre Zucht," who presided over the meeting, stated that the invention was quite ingenious, but observed that beekeepers "could not spend any of their time on such a toy."

But Wankler, who was a master clock-maker as well as master bee-keeper, had himself built his apparatus, and called it "Russelmesser" (glossometer); he was not in the least discouraged by this decision. In 1882 he measured the tongues of bees of different colonies and found a great difference. The colonies whose bees had the longest tongues were selected for breeding. The year following, 1883, he exhibited his glossometer at the Frankfort exposition. But he was ridiculed by other beekeepers.

One visitor only, an American, Frank Benton, took interest in the invention and bought a glossometer and some of Wankler's apparatus for artificial queen rearing.

In 1884, Wankler again exhibited his glossometer at the exposition of Adelsheim, Baden. Although it attracted attention, the invention was not adopted. In 1906, a new glossometer was perfected by him. Both of these implements are described in the fourth edition of his book on queen selection, which was published by Theodore Fisher, of Freiburg.

Eleven years after the Wankler invention, Charton-Froissard, of Dampierre, France, invented another glossometer. He gave the results of his first experiments in the "Abeille de l'Aube. The measurements of the tongues of the bees of six different hives gave the result of a difference of 2.1 millimeters, from which he concluded that there must be quite a difference in the ability of bees to reach nectar in deep flowers.

At the first International Congress of Brussels, this experimenter presented an essay on "The length of tongue of bees and the effect which this may have upon the crop." As neither Charton nor Wankler was present, no action was taken upon this question.

for February, 1925

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At the second Congress at Paris, in 1900, Charton again presented a report on the same subject. He gave an account of measurements he had taken on the bees of 18 different colonies, and the comparative yields of those colonies. A colony whose bees had a length of tongue of 9.5 millimeters harvested 12½ pounds more honey than a colony with length of tongue of only 7.3 millimeters.

Mr. Charton, like Mr. Wankler, took the position that with the help of a good glossometer beekeepers may increase the results of an apiary considerably, and that, the longer the tongue of the bees, the greater the results they may expect through their intelligent efforts.

Luxemburg.

(This question of the length of tongue of bees is of importance; but it is probable that the reason why beekeepers have not paid much attention to the subject is that, after all, the greater length of tongue displays itself in results in honey crop. So, if beekeepers select the best honey producers to breed from, they will very probably select bees with longer tongues. The matter was very much discussed in the American Bee Journal in 1901 and 1902. In September, 1908, Professor Kulyagin gave different measurements, showing the Cyprian bees to have the longest tongues. But, unfortunately, they appear also to have the sharpest stings.—Editor.)

#### Eczema Vs. Pollen Poisoning

On page 469, October Journal, H. E. Weisner, Tucson, Ariz., reports poisoning from pollen. The way he describes his trouble, it just fits my ailment that started last February and kept on all summer. I do not think pollen had anything to do with it, as several younger men, who never handle bees nor eat honey, were cured in a few weeks, while I have tinkered with 200 colonies. I am in my 85th year. The propolis I handled may have made it hard to treat. I have tried many remedies without a cure. I am now taking electric treatment and it is reducing it. The doctor calls it eczema.

J. W. Ware, Puyallup, Wash.  
(According to some authorities bee stings will cure eczema, if applied in sufficient numbers.—Editor.)

#### Hoarhound Honey

Honey having the medicinal qualities of hoarhound candy can be produced late in the fall by planting waste places with hoarhound. The hoarhound blooms late in September and October, when bees find few other flowers to "work" on.

As honey, it will not be in demand, but it is more palatable than the candy usually sold in drug stores. In communities where such honey is produced a ready market should be found through the local druggists.

J. E. Whitefield, of Moran, Wash., obtained 25 pounds of hoarhound honey from his hives one fall, using

it in his family and distributing it among his neighbors for medicinal purposes.

A. Nix.  
Spokane, Wash.

#### Ivy Treatment

In the December issue, I see mention of remedies for ivy poisoning. That prompts me to recommend as the very best treatment, simply to paint the surface with tincture of iodine as soon as itching or burning begins. Don't be stingy with the iodine. (Every household and factory should have at all times a bottle of iodine ready for immediate use in various emergencies).

Now with reference to ivy poisoning, if a person gets pretty badly touched up, say about the face, it may be better to get the doctor, but for ordinary cases one or two paintings will end all trouble. I know from experience. C. D. Cheney.  
New Jersey.

#### Cream and Honey on Bread

Here is a use for honey that is not generally known. My brother came home from college and told me that good thick cream and clover honey on bread was a common dish for breakfast on the school table. Mornings when this dish is served the boys are sure to get up for breakfast.

I tried it myself and found it delicious. In fact, I like it better than any other way I have ever eaten honey.

J. C. Anderson.  
Minnesota.



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## MEETINGS AND CONVENTIONS

### The Thirty-fifth Annual Convention of the California State Beekeepers Convention

The thirty-fifth annual convention of the California State Beekeepers' Association met in Sacramento December 9, 10 and 11. The attendance was only fair, but those who came in many cases represented their entire home societies and carried back a report full of enthusiasm. The main topic of the convention was the proposed enactment of a law placing all county bee inspection directly under the supervision of the State Department of Agriculture. The feasibility of this proposed scheme was discussed fully. There was not a person present but who was heartily in favor of this upward move at the end of the convention.

A number of good speakers appeared on the program. The subject of the pollination of fruits by bees was covered as well as the poisoning of bees by fruit spraying. Beekeepers, fruit growers, county horticultural commissioners, preachers, supply manufacturers and storekeepers all took part in the discussions. Director G. H. Hecke, of the State Department of Agriculture, gave a very constructive talk. Rev. G. W. Phillips spoke on the use of the radio in beekeeping.

The Association adopted a new constitution under which it should thrive and grow to what such an association might be in as great a beekeeping state as California. It is hoped that all beekeepers will now rally to the support of the California State Beekeepers' Association.

The writer never attended another beekeepers' meeting where such a feeling of sincerity of purpose and good will was sensed. The one thought seemed to be to do that which was best for all in the industry. The sentiments expressed indicate that the California beekeepers are now ready and anxious to pull together as a single unit.

Geo. H. Vansell.

### Reunion of Ohio Beekeepers

The annual reunion of Ohio beekeepers will be held at the Ohio State University February 5 and 6, under the direction of the Ohio Beekeepers' Association. The meeting will follow the plan of the International Congress recently held at Quebec, in devoting each session to a special subject. The subjects to be considered are organization, production, marketing, and disease, and all beekeepers present are expected to take part in the general discussions. Among the speakers will be J. I. Hambleton, of Washington, D. C.; B. F. Kindig, of Michigan; E. R. Root, Dr. J. C. Hutzelman, Fred Leininger, F. E. Schriver, C. A. Reese and F. B. Moore, of Ohio. Miss Adele Koch, of the Agricultural Extension Service, will talk on the value of honey as a food. Possibly C. Vaillancourt and Mr. Gooder-

ham will be there, also. C. P. Dandant expects to be there. The annual banquet will be held on Thursday evening, at which Mr. Fred W. Muth, of Cincinnati, will be toastmaster. All persons interested in better beekeeping are invited to attend this reunion.

### Missouri Beekeepers Meet

The Missouri State Beekeepers' Association held its twenty-first annual all-day business session at Marshall, October 22. Everyone present was a "live wire" and thoroughly interested. The meeting was very profitable and said by some to be the best the Association has had. The newly-elected officers are: President, J. P. Williams, Joplin; First Vice-President, A. W. Gale, Chillicothe; Second Vice-President, M. C. Hollems, Rolla; Secretary, Clay T. Davis, Braymer; Treasurer, Fred H. Drury, Unionville; Advisor, J. F. Diemer, Liberty.

If your name is not on the Association free mailing list, send it to the Secretary. The names of your neighbor beekeepers will also be appreciated by the Secretary.

### 100 Years of Iowa Beekeeping

S. W. Snyder, of Center Point, the newly elected President of the Iowa Association, comes from a long line of beekeeping ancestors. His parents and grandparents before him were Iowa Beekeepers, having been among the early settlers of that state. He thus represents more than a century of continuous beekeeping in Iowa.

In this connection the American Bee Journal would like to publish the fact if any reader knows of a case where bees have been kept continuously for a longer time in one family.

### Third Annual Four-Day Beekeeping Course at Purdue

The third annual four-day beekeeping course will be given at Purdue University, Lafayette, Ind, February 16-19. A complete and instructive program is prepared, including as speakers, J. T. Hambleton, now Chief of the Office of Bee Culture, Washington, D. C.; George S. Demuth, Jay Smith, W. A. Prince, T. C. Johnson and others.

### The League Functioning Well

Early reports of the meeting of the American Honey Producers' League meeting in Chicago, late in January are that great interest is being shown in the problems brought up there.

Of special interest were the bonding of queen breeders, honey grading, disease legislation, and the activities of the traffic committee relative to rail rates on honey.

The meeting was well attended. A more detailed report of the meeting will be given in our March number.

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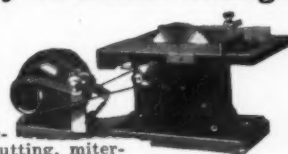
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CLARENCE ERDMAN,  
Route 1, Berlin, Wisconsin.

## THE WISCONSIN STATE STATE CONVENTION

I am just home from the State Convention of Wisconsin Beekeepers held at Madison, and with the picture still fresh in my mind, and a clear recollection of what was said by the few leading speakers, I will report on some of the things that impressed me as being of much importance.

On the evening of the second day, we had a banquet at the "Honey Tea Room," on University Avenue, which is conducted by our worthy Secretary, Miss Fischer. This honey tea room is unique. They serve dainty and wholesome lunches with honey in many different combinations, as candy, honey ice cream, honey cakes and honey preserved fruits. It seems to the writer that it is one of the best advertising agencies imaginable, and we are glad, for Miss Fischer, and for the beekeepers of the whole country, that it is making good. We had a lovely banquet. Space forbids describing the entire menu. Fruits, vegetables and honey occupied a large space.

While the after dinner speeches were being made, Morley Pettit, of Ontario, came in and gave us a pleasing talk. On the second day, Ernest Root was also present and spoke. Those two were the only ones we had from outside the state, as I recollect.

The second day Mr. Pettit described his methods of extracted honey production and the general management of his business. Mr. Pettit uses a closed end extracting frame with top and bottom bars of equal width, I think he said an inch or a little less. This is to insure good transportation conditions, as he trucks all full supers to the central extracting plant.

He uses a long, straight bladed knife, steam heated, for uncapping, and cuts down to the level of the top and bottom bar. Thus the wide end bars do not hinder fast work. He states that he and two helpers extracted 10,000 pounds each day for two days in succession, and the only reason they did not keep on doing so was that they ran out of honey. He has simplified his methods as much as possible, and eliminated many manipulations that were once considered necessary. He has much honey in the cappings on account of cutting deep, but he does not consider that an objection, as his melter does not injure the honey.

E. R. Root told of his recent journeyings in the South and called attention to the large amount of business being done in the package bee business. He inferred, though he did not advise it, that beekeepers of the North could, without loss, destroy their bees in the fall and replace with package bees in the spring. This method would solve the wintering problems, save the honey that the bees would consume and the extra labor incident to packing or cellar wintering.

Not a word was said of what this method would mean in the eradication of brood diseases, but I could not help mentally making the connection. If each colony showing disease should be destroyed at the close of the season, all fixtures disinfected, combs rendered or treated, and healthy bees secured in the spring, how long would it be until American foulbrood would cease to worry our state officials?

The writer knows that the method is a good one, as he tried it the past season on a small apiary in which he had been unable to eradicate the disease by the standard methods. Now we have a clean yard and powerful colonies of healthy bees. Our package bees came from Alabama about the middle of May last, and the only trouble was that they built up so rapidly that they surprised us by swarming earlier than we expected, and we lost three prime swarms, which fact we are almost ashamed to report.

The Watertown people were represented in the persons of Mr. Kenneth Hawkins and Mr. Atkins, who was formerly a student with Morley Pettit and spoke of the great benefit he received from the association.

Our convention was not unusually large, but the interest was intense and all who attended will remember it as a very pleasant and instructive meeting.

Harry Lathrop.

Bridgeport, Wis.

## Another County Organized

Redwood County, Minnesota, has now a county association known as the Redwood County Bee Association. The Rev. Mr. Casper, of Wanda, is the President; Mr. A. C. Bellville, of Tracy, Vice President, and Rev. M. F. Mommsen, of Belview, Secretary and Treasurer.

The greater part of Redwood County was in bygone days known as the "Honey Desert of Minnesota," but with the advent of sweet clover that now grows in great profusion everywhere, and because stock raising has become a very prominent adjunct of the farming industry, the white clover flourishes abundantly in all pastures, thus converting the "Honey Desert" into a land that literally "flows with milk and honey."

## Energy Production of Honey

"One tablespoonful of honey is a 100 calorie portion," says Industrial Arts for Elementary Schools, a new textbook for use in devising more interesting teaching methods for children in the lower grades.

"It is wise to become familiar with the number of calories in a given quantity of each of the common foods. With this knowledge and the knowledge of what food principles are contained in each food, the child soon can learn to plan his meals with some degree of judgment as to what to eat."

## QUEEN EXCLUDERS

By E. F. Atwater.

I have queen excluders of various types in use, and all seem to answer the purpose quite well. While I have no prejudice against the wire excluders, yet, as the openings of the bees are so small, and they cannot be obtained with larger openings, I prefer perforated zinc with openings a little larger than the usual 162 thousandths of an inch of the wire excluder. In fact, the excluders which I like best have openings 165 to 170 thousandths of an inch wide, as I am convinced that there is some hindrance to the bees passing freely through the smaller openings. I, for one, would infinitely prefer that one queen in a hundred would be able to pass into the supers rather than to have the bees hindered in more than the minimum degree.

In fact, with very old excluders with openings larger than at present used, I have had but few queens which could pass through the excluder.

I have some plain zinc excluders, and they are not so bad, and some of my helpers prefer them, and with such excluders, I prefer the openings to extend crosswise of the frames, as probably giving freer passage.

While I have no objection to a well-made wood-zinc excluder, yet that type of excluder has, without doubt, done a great deal to cast unmerited discredit on all excluders. If all parts are fitted closely, and the wood-zinc excluder left where it will absorb moisture or piled where rain can fall on it, the wooden slats swell, force the metal together, and reduce the size of the openings, often making them so narrow that few bees can pass. The colony which is obliged to pass through such an excluder will very naturally fall far below some colonies on which no excluders are used, in the amount of surplus stored.

I made a gauge in the shape of a long wedge-shaped piece of sheet brass, graduated by the aid of a micrometer, and found but few of my older wood-zinc excluders fit to use. However, this type of excluder is O. K. when made with a chance for the wood strips to swell or expand without crowding the zinc strips. If not so made, they will too often become worse than worthless, and no manufacturer should make such excluders without sufficient play between strips of wood and metal, to prevent such swelling of the wood strips.

I have never bought a wood-wire or a wood-zinc excluder that was half nailed. The makers who ship presumably assembled goods, apparently have not the slightest conception of the tenacity with which propolis will hold, and it is a common experience



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Pearl and Walnut Sts. Cincinnati, O.

## Early Order Discounts

EVERYONE, including the beekeeper, is looking for a way to save money—this is one of them.

SECTIONS, SECTION HOLDERS, SEPARATORS, HOFFMAN BROOD FRAMES—ALL AT LIBERAL DISCOUNTS. Write in for quotations on the supplies you need for the 1925 season.

Orders forwarded immediately on receipt. Newly manufactured stock on hand with more in process.

### CHARLES MONDENG

146 Newton Ave. N. and 159 Cedar Lake Road  
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Illustration shows the big office and warehouse across from the Santa Fe freight depot, filled with a big stock. Mr. Ebert, manager, is to give his entire time to filling your orders promptly and answering your correspondence. Wichita is better prepared than ever to serve beekeepers of the great Southwest. Ask him for a free copy of "How to Produce Honey."

G. B. Lewis Company

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## APRIL 1 TWO THOUSAND PACKAGES JULY 1

**A Large Supply of the Finest Quality Italian Bees  
Insures Your Order**

**\$5.00**

3-lb. package with queen.  
3-frame nucleus with queen.

**\$3.75**

2-lb. package with queen.  
2-frame nucleus with queen.

**WRITE FOR ATTRACTIVE QUANTITY PRICES**

Orders filled in rotation.

Safe delivery and satisfaction guaranteed.

**W. E. BUCKNER, Mount Vernon, Ga.**

## Better Service for the Buyer of Bee Supplies

is one of the principal aims of our business. We believe, therefore, that our greatest usefulness lies in supplying WHAT you need, WHEN you need it.

We are manufacturers and distributors of just a little better bee supplies, just a little higher grade SECTIONS, Bee Hives and Frames, in fact, everything the beekeeper needs.

Write for our free illustrated catalog and price list today.

**August Lotz Company, Boyd, Wis.**

### 500

Regular customers demand MACK'S Queens. We will have queens for 500 more and at these prices you CAN'T GO WRONG. We guarantee that. Select untested only \$1.00 each, \$10.00 per dozen. Write for prices in larger lots. Booking orders now.

**HERMAN McCONNELL**  
(The Bee and Honey Man)  
Robinson, Illinois.

### PURE BRED THREE-BAND ITALIAN QUEENS AND BEES

1 untested queen	-----	\$1.00
6 untested queens	-----	5.40
12 untested queens	-----	10.00
Tested queens, each	-----	2.00

Package bees and nuclei a matter of correspondence.

Safe arrival and satisfaction guaranteed.

**M. E. EGGERS,**  
Covington, Louisiana.

**PLANS for Poultry Houses**  
All styles, 150 illustrations; secret of getting winter eggs, and copy of "The Full Egg Basket." Send 25 cents.  
INLAND POULTRY JOURNAL, Dept. 58 Indianapolis, Ind.

to see discarded excluders in apiaries in many states, simply because the manufacturer did not realize that excluders should be nailed in the best possible manner, and the beekeeper did not find out that they were poorly nailed until they began to go to pieces in actual use.

Of course, with our own bees, we usually have a Hanson ventilator in the front end of each hive body, and the ventilator in the first super above the broodnest and excluder is open in warm weather, so no bee needs pass through a congested broodnest and perhaps a damaged excluder in order to get into the super, but can, if it wishes, pass directly from the fields into the super, through the ventilator, and with some colonies very many bees do take advantage of this direct passageway to the storage chamber.

**Keep those wood-zinc excluders in out of the rain.**

Idaho.

### A Study of Granulation

At the request of beekeepers, the Office of Bee Culture, at Washington, D. C., has begun the study of the rapidity of granulation in comb honey from various regions of the country. They hope to find what causes the variations in comb honey granulation and how comb honey may be handled to better advantage in respect to granulation.

For this purpose samples of comb honey from all over the country are needed. If you are interested in this send a sample of the comb honey of your section, properly protected with packing to avoid mailing damage, to the above office.

### Atkins to Broadcast in February

E. W. Atkins, of the G. B. Lewis Company, at Watertown, Wis., will be on the air February 24, for two talks on the beekeeping industry from Sears-Roebuck Station at Chicago, WLS, 340 meters.

Between 12 and 1 o'clock, on Tuesday, Feb. 24, he will talk on "Latest Methods of Feeding Bees" and in the evening of the same day on "How Bees Make Honey."

On March 3 he will again lecture from the same station at noon on "Swarm Control to Produce Bigger Crops," and at night on "How to Give Bees Supers for Maximum Honey Storing."

### Demonstration Apiaries

Prof. F. B. Paddock, of Ames, is trying to secure a greater number of demonstration apiaries throughout the state. Beekeepers who are desirous to have a few of their colonies employed in that way, for comparison and education, should write to F. B. Paddock, State Apiarist, at Ames, for information concerning the requirements and the advantages. Prof. Paddock wishes to charter these establishments as the stations of the Swiss associations have been chartered for experiments, for the last 25 years. This is certainly in the line of progress.

**BOLENS** Garden Tractor

Does Seeding, Cultivating and Lawn Mowing with greater saving of time and effort. Attachments for different jobs are instantly interchangeable. Many indispensable, exclusive features such as the patented arched axle, tool control, instant hitches, etc. A boy or girl will run it with delight.



Write For Catalog

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# Foundation Facts

**Q**VER since the late A. I. Root tried paraffine as a substitute for beeswax in foundation making, it has been an established fact that beeswax is the only product that when converted into foundation is acceptable to the bees. Furthermore, it is known that beeswax produced in our own country is far better for the purpose than the foreign wax which is dumped on our markets. It is also generally known among foundation manufacturers that the bees-

wax from the higher altitudes of the West possess certain important advantages over the general run of wax produced in other parts of our own country.

"SUPERIOR" FOUNDATION is the product of the choicest beeswax of the West, selected from the many tons of beeswax that we receive annually. No foreign wax ("shoddy") of any description enters into the manufacture of our foundation, and combs built from it will yield only pure beeswax.

## CONSIDER THIS

No special equipment is necessary to accommodate "SUPERIOR" FOUNDATION. Don't junk your good standard equipment. Keep that favorite standard frame. It's too expensive for you to change such equipment to make it fit up with the pet

whims that may be suggested to you.

"STICK TO STANDARD STUFF" is a mighty fine motto. Standard equipment is recognized everywhere. It costs less, yet represents the greatest re-sale value.

## FIGURE THE COST PER SHEET— not the cost per pound

"SUPERIOR" Medium Brood Foundation runs just 7 sheets per pound for standard size Hoffman frames. You will find foundation on the market which is as heavy as  $5\frac{1}{2}$  sheets per pound, while foundation which runs 6 sheets per pound is not uncommon. Let us assume a price of 70c per pound for foundation and figure what this difference really means.

If there are 7 sheets in a pound, the price is exactly 10c per sheet; but if the foundation runs only  $5\frac{1}{2}$  sheets per pound, each sheet costs approximately 12 4-5c. The saving is not great on one sheet, but on only ten sheets the saving is 28c. On 100 sheets, you save \$2.80, or on 1,000 sheets the saving is \$28.00. The saving is sufficient to cover the transportation charges.

*"Shun the Shoddy"*

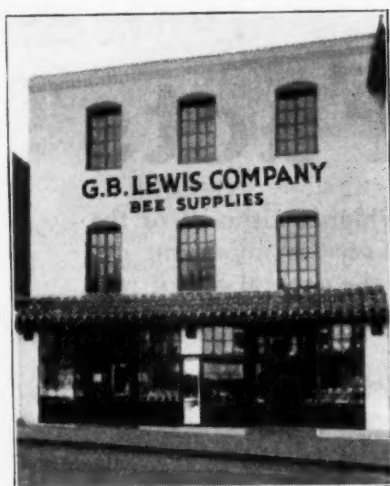
*"Stick to Standard Stuff"*

*"Specify 'Superior' "*

**SUPERIOR HONEY COMPANY**  
OGDEN, UTAH

Branches and agencies at Idaho Falls, Idaho; Los Angeles, California;  
Manhattan, Montana; Delta, Colorado





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At the left is an illustration of the branch office and warehouse in charge of our own manager, whose single job is to give your orders and correspondence immediate shipment or answer. Mr. Hiatt is a Virginian, well acquainted with southeastern conditions. Ask him for a free copy of "How to Produce Honey."

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408 12th St., Lynchburg, Va.

INCREASE YOUR PROFITS  
by buying

## BEE SUPPLIES

*That are made to Satisfy*

AT RIGHT PRICES

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**A. H. RUSCH & SON CO.,** Reedsville, Wisconsin

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MANUFACTURERS OF  
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ESTABLISHED 1856  
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MONEY**

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If no dealer, write factory.

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(Please mention Am. Bee Journal when writing)

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## DO YOUR GARDEN WORK This Easier, Better Way

Keep the weeds out and the plants growing. Thousands of practical gardeners, truck growers and florists everywhere use the

### **BARKER** Weeder, Mulcher & Cultivator 3 Garden Tools in One

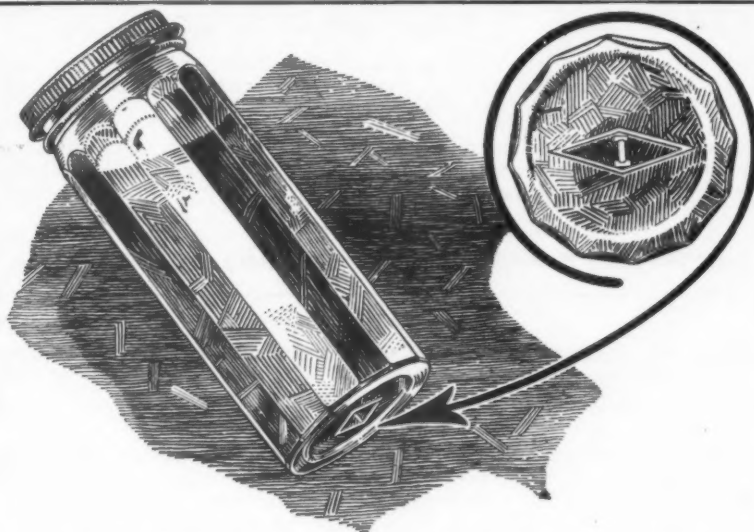
Push this machine as fast as you can walk. Eight revolving blades work in combination with an underground knife. "Best Weed Killer Ever Used." Gets close to plants. Cuts runners. Guards protect leaves.

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In the same operation, it chops the clods and crusted surface into a level, moisture-retaining mulch—wonderful to grow harder plants and larger, finer vegetables. A boy can use it and do more and better work than ten men with hoes. Inexpensive.

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## TASTING WITH THE EYE

Shelf-shoppers naturally do a good deal of mental tasting when hunting for good things to eat. They feel somehow that "What looks good must also taste good."

What a chance then for golden, luscious Honey, sparkling through the Window-like surfaces of "Diamond I" Fluted Honey

Jars, to tempt the eye

"Diamond I" Jars are available in half-pound and one-pound sizes, equipped with tight fitting caps and packed two dozen to a case in Corrugated Re-shipping Cases.

If the Bee Keepers' Supply House in your vicinity does not stock these, write us direct.

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Send Your Order Now

Untested, \$1 each, \$95 per 100.  
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All queens are grown by the very best methods. Packages and nuclei priced on request.

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Send stamps or coin today.  
Poultry Tribune, Dpt. 3 Mount Morris, Ill.

My excellent three-banded Italian queens are bred for honey production. They are gentle and hardy. Reared from the best mothers obtainable. I will have 1,000 mating nuclei in operation by May first. Safe arrival and satisfaction guaranteed. Queens, untested, \$1.00 each, 12 for \$10.00, 25 or more 80c each. One tested, \$1.50 each, 12 for \$16. Breeders, \$5.00.

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Quality Service

None better at any price.  
Illustrated circular free.

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We make a Specialty of working your wax for Cash.

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A full line of supplies and the Best Sections and Hives made in Wisconsin, at lowest prices and in any quantity.

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We carry a complete line of everything in the apiary. Our shipping facilities are as good as can be found anywhere. We want your business. We guarantee prompt and satisfactory service. Price list free.

**MARSHFIELD MANUFACTURING COMPANY, Marshfield, Wis.**

**ITALIAN QUEENS**

Our Old Reliable Three-banded Italians have a reputation as honey-gatherers. They are of an exceptionally vigorous, long-lived strain of bees. They are gentle, prolific and very resistant to foul-brood. We are now booking orders for spring delivery, one-fourth cash. Safe arrival guaranteed in United States and Canada. Circular free.

Prices for April, May and June, 1925:

Untested, \$1.25; 6, \$6.50; 12, \$12. Tested, \$2.50; 6, \$14. Select untested, \$1.50; 6, \$8.00; 12, \$15. Select tested, \$3.00.

**JOHN G. MILLER 723 C STREET Corpus Christi, Texas**

SEASON 1925

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**Three Banded Italian Queens**

\* From fresh breeders.

One mated \$1.00; Six mated \$5.00  
More than twelve at 70c

Package Bees one to ten each \$3.00; ten to one-hundred at \$2.25; same with queen \$3.50; over ten at \$2.75

Large orders will be quoted at special prices.

Ready to ship March 15, 1925.

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THE DADANT SYSTEM OF BEEKEEPING.  
"LE SYSTEME DADANT EN APICULTURE."  
"IL SISTEMA D'APICOLTURA DADANT."

The Dadant methods of management clearly explained, in either of three languages, English, French or Italian. 115 pages—55 illustrations—cloth bound—\$1.00.

**AMERICAN BEE JOURNAL, Hamilton, Ill.**

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Shipments start April 20th. Order now to secure early shipping dates. Pure three-banded Italians only.

2-lb. package with select young

laying queen ----- \$4.75

Five 2-lb. packages ----- 22.50

Twenty-five 2-lb. packages -- 112.50

3-lb. package with select young

laying queen ----- 5.75

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Twenty-five 3-lb. packages -- 137.50

Express charges collect at destination. Safe arrival guaranteed. Inspection certificate and all necessary papers to carry packages through without delay. If packages are wanted by parcel post add 15c and postage to the price of each. We will advise you cost of postage to your P. O. If wanted without the queens, deduct \$1.00 from the price of each package.

**QUEENS**

Select young laying queens \$1.00 each, any number. Tested queens \$1.75 each, any number.

Terms 20 per cent with order, balance a few days before shipment. No bees sent C. O. D. Producing and shipping package bees and queens has been our sole business for many years. We have passed the costly and dangerous experimental stage. Your order placed here brings highest value for the money invested. For complete information send for latest price list.

**W. D. ACHORD, Fitzpatrick, Ala.**

**GOLDEN QUEENS**

Untested, \$1.00 each, or six for \$5.00; 100 untested queens, \$75.00. Tested queens, \$2.00 each.

I guarantee safe arrival, satisfaction, and ship nothing but the best.

**G. A. Taylor**

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**Bee Journals**

We have made arrangements to handle subscriptions to the following bee journals:

	Reg. Price.
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Our offers are as follows:

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American Bee Journal one year with any two of above, only 2.75  
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Send your order today

**AMERICAN BEE JOURNAL**  
Hamilton, Illinois

**GOLDEN QUEENS AND BANDED BEES**

Untested queens ----- \$1.00 each

Tested queens ----- 1.50 each

Bees ----- \$1.50 per lb.

Nucleus ----- \$1.50 per frame

Bees inspected; free from disease.

**J. W. SHERMAN**  
Valdosta, Ga.

## 20,000 CITRONELLE QUEENS

### BRIGHT ITALIAN BEES AND QUEENS

We are prepared to produce more than twenty thousand queens the coming season. We reared and sold more than 12,000 last season and returned many orders because we were unable to fill them.

Let us book your order now; only 10 per cent deposit required, balance before shipment.

Untested queens—\$1.00 each, 12 for \$10.00 or 100 for \$75.00.

Select untested queens—\$1.20 each, 12 for \$11.00 or 100 for \$85.00.

Package Bees with Untested Queens—

2-lb. package, \$4.20 each; 10 or more, \$4.00 each.

3-lb. package, \$5.20 each; 10 or more, \$5.00 each.

**Satisfaction and Prompt Service Guaranteed**

**THE CITRONELLE APIARIES, CITRONELLE, ALA.**

## PACKAGE BEES FOR 1925

What will be your requirements in the spring? If you do not know exactly until you have ascertained your winter losses, why not estimate as nearly as possible and place your order now, so that your order will have first consideration in the spring? We will be prepared to ship several thousand packages on rush orders, but it will be impossible to supply all if the demand is too great. If your shipments are delayed it spoils the value of your purchase, so help us to avoid this by ordering now and be sure that you will get this many on time; if you wish to increase your order we will do our best to supply any additional you might want. Write us what your requirements are for this season and let us tell you what we can do toward supplying you your wants, whether it be one or one thousand packages.

Our prices of SUPERIOR Italian Bees and Queens.

	One	Ten		One	Ten
Two-pound packages, with queens	\$4.50	\$4.00	Three-pound packages	\$5.50	\$5.00
43 colonies purchased from us produced 20,000 in a single season.					

### DURABLE CYPRESS SUPPLIES:

100 Cypress Hive Bodies with Frames	\$110.00	1000 White Pine Hoffman Frames	\$45.00
100 Shallow Extracting Supers, with Frames	70.00	1000 Shallow Extracting Frames	32.00

**THE STOVER APIARIES, MAYHEW, MISS.**



## Lewis Beeware Dadant's Foundation

**In Albany, New York ready for shipment**

Walter Severson, well acquainted with New England conditions and a New Yorker himself, is in charge of our big stock of goods at the office and warehouse shown at the left. He can advise New England beekeepers on their problems, and his one job in 1925 is to give prompt shipment of your orders and to answer your letters at once. Ask him for a free copy of "How to Produce Honey."

**G. B. Lewis Company** <sup>328</sup> Broadway Albany, N. Y.

## VERY LOW PRICES ON PACKAGES—BEES—NUCLEI

**Guaranteed QUALITY AND SERVICE backed by a large experience. Write for prices and information**

**A. J. HEARD R. F. D. NO. 1 WELLSTON, GA.**



**THE TONGUE RIVER APIARIES**

COMB AND EXTRACTED HONEY



EARL C. REED, MANAGER

RANCHESTER, WYOMING

The A. I. Root Company  
Council Bluffs, Iowa

Gentlemen:-

I want to tell you of my experience with Three-Ply Airco. The past season we put in six hundred pounds of your Medium Brood Airco and a sprinkling of five pounds of Three-Ply, with the frames carefully marked with a "3" to see if we would be justified in spending the extra money for Three-Ply in the future. These trial sheets were put on the hives under all the varying conditions of the season, the entire absence of warping, gnawing and sagging and the 100 per cent worker cells that was evidenced on every frame bearing the "3" has convinced me that it's folly to use anything else. We are melting up something over a thousand old combs and when this wax is rendered, will ship it to you with the wax from our cappings, and will want all of it made into Three-Ply Airco.

Yours very truly,

EARL C. REED.

## Earl Reed says in this Letter

I want to tell you of my experience with Three-Ply Airco. The past season we put in six hundred pounds of your Medium Brood Airco and a sprinkling of five pounds of Three-Ply with the frames carefully marked with a "3" to see if we would be justified in spending the extra money for Three-Ply in the future. These trial sheets were put on the hives under all the varying conditions of the season, the entire absence of warping, gnawing and sagging and the 100 per cent worker cells that was evidenced on every frame bearing the "3" has convinced me that it's folly to use anything else. We are melting up something over a thousand old combs and when this wax is rendered, will ship it to you with the wax from our cappings, and will want all of it made into Three-Ply Airco.

Yours very truly,

EARL C. REED.

Ranchester, Wyo., Dec., 1924.

## *Easy to Magnify a Letter, but Impossible to Magnify the Importance of these facts:*

- THAT—Three-Ply can be put on hives with safety under all the varying conditions of the season.
- THAT—Three-Ply does not buckle or sag, and that it is not gnawed by the bees.
- THAT—Three-Ply gives the Maximum number of worker cells. "100%" in this regard.

**FOR THESE REASONS THREE-PLY IS THE MOST SATISFACTORY FOUNDATION OF THE PERMANENT TYPE. AND EVERY POUND IS GUARANTEED TO GIVE YOU COMPLETE SATISFACTION AND TO TEST OUT FOR YOU EXACTLY WHAT WE CLAIM FOR IT:**

A full stock of Three-Ply is carried at Council Bluffs. May we not send you our free booklet, "Three-Ply Foundation," telling about this remarkable product, and quote on your foundation requirements? It will pay you to investigate.

For it is of paramount importance for producers to get a maximum of efficiency and serviceability out of each comb. Start now using permanent combs that are perfect. Write today for full particulars and prices.

**THE A. I. ROOT COMPANY OF IOWA**  
COUNCIL BLUFFS, IOWA

# Crop and Market Report

Compiled by M. G. Dadant

For our February number we asked the following questions of our reporters:

1. How is the honey demand?
2. How much honey is left on hand?
3. Will it move before the new crop?
4. Weather and bee prospects, so far?

## HONEY DEMAND

The honey demand has not held pace with the propitious start made last fall, when demand started in briskly and so continued until past the first of December. We must not forget, however, that there is generally a lull in honey sales during holidays, which does not again liven up till near the first of February.

The demand in the East and Southeast has been best.

## HONEY ON HAND

Stocks of honey on hand are not sufficient to cause the beekeepers much worry. A few reports are to the effect that some little will be carried over into 1925, but that no worry is caused thereby. New England, New York, in fact all the eastern and southern states, are well sold out. Texas, also, is sold close, their co-operative association reporting only two cars left on hand, with a slow demand. In the central west, most of the honey is now in the hands of buyers or carried by beekeepers to supply their trade till the new crop is available. The same condition exists in the plains area.

The inter-mountain territory has still some honey available, several cars still not being marketed. Report of one car of comb from Montana is also received. Idaho reports four cars of extracted holding for a price of 9 cents or better. California and the Coast have sold all the home crop, and carloads are being imported from Nevada, Utah and inter-mountain for supplying the demand.

## WILL IT ALL MOVE?

There seems to be but little doubt, even though the demand is short of what had been anticipated, that the whole crop can be moved before the new crop year opens. Bottlers and dealers are not buying heavily, which in itself is a good sign, since they should have their old

stocks well cleaned up when the 1925 crop goes on the market.

## PROSPECTS

Prospects in general are favorable. The entire north started in the winter with unusually warm weather, which boded a heavy use of stores. Since middle December, however, the weather has been continuously cold. It seems to be an ideal "cellar winter" so far. Unpacked bees wintered outdoors may suffer heavy casualties should the present cold wave continue much longer without allowing of a flight. Well protected bees should survive the cold without bad effect. The same condition applies in the plains area and inter-mountain.

In the South, the weather has been abnormally cold lately, cutting down on some of the earlier nectar plants and checking brood rearing. California has had similar experiences.

## HONEY PLANTS

A heavy blanket of snow extends over the whole north half of the country. Clover generally went into winter in good shape, and the snow covering should bring it out in best possible shape.

The southeast reports prospects good for a honeyflow. Texas is rather under par, due to the drought. There is still time for moisture to liven the prospects, but it must come shortly or at least some shortage in the crop is likely.

From Wyoming north, plentiful snows cover the ground, making for good plant condition in the spring. From Colorado south it appears too dry for this season of the year.

Southern California, likewise, is complaining of dry weather, some reporters even predicting already that orange will probably be the only honey producer in 1925. The season is yet early, however, and rainfall between now and March 1 should remedy this condition to some extent.

Northern California, on the contrary, has had good rains and prospects are very favorable.

All in all, prospects, as seen from this early date, are very much better than a year ago, the most serious drawbacks being drought in some sections, and extreme cold for outdoor unpacked bees in others.

## THE TEN COMMANDMENTS

Before ordering your package bees for 1925, be sure that your shipper has the following requirements:

- 1st—Financial standing to protect you against loss.
- 2nd—Sufficient number of colonies to fill orders without delay.
- 3rd—Enough experienced help to get bees out in time and in good order.
- 4th—A type of package that has stood the test, and will put bees through in good condition.
- 5th—That he is on a trunk line railway, to insure quick delivery.
- 6th—That his strain of bees and queens produce results.
- 7th—That he is honest in all of his dealings.
- 8th—That any replacements of bees or queens are made as soon as bad order for bees, or dead or unsatisfactory queen is received.
- 9th—That he makes a living wage out of them. If not, he is going to "BUST" some day, and you may suffer.
- 10th—That he gives full weight, and 100 cents of value for every dollar sent him.

A card brings our literature giving proof that we will fill these commandments. It will be a cent well spent. "NUFF SED."

**GEO. A. HUMMER & SONS, PRAIRIE POINT, MISS.**

SHIPPING POINT, MACON, MISS.

We are offering a limited number of two-pound packages of first-class Italian three-band and leather-colored bees this season, and urge our customers to book their orders early.

One two-pound package of bees.....\$2.50      Queen, untested, young .....\$1.00  
Circular on request.

**LOVEITT HONEY CO. 602 N. 9TH AVENUE PHOENIX, ARIZ.**



## CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 5 cents per word, with no discounts. No classified advertisements accepted for less than 35 cents. Count each initial or number as one word.

Copy for this department must reach us not later than the 15th of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

### BEES AND QUEENS

#### HONEY IN PAIRS—

Atwater, Meridian, Idaho.

**SHE-SUITS-ME QUEENS**—Three-banded \$2.00 each. After June 5, \$1.00 each. Send for Price list of queens, nuclei and package bees. Free with each initial order, one Safin cage Allen Latham, Norwichtown, Conn.

**PURE** three-banded Italian queens at \$1.00 each or 6 for 5.00. One frame brood and 2 pounds of bees with queen, \$3.90; no disease. One-fourth cash with order, balance at shipping time.

C. G. Ellison, Belton, S. C.

**FOR SALE**—Bees, 2 pounds and queen, \$4.00; 3 pounds and queen, \$5.00! young three-banded Italian queens. Health certificate with each shipment; 10 per cent discount on large orders. Safe delivery and satisfaction guaranteed.

J. L. Leath, Corinth, Miss.

**FOR SALE**—Golden Italian Queens, untested \$1.00 each; 6 for \$5.40; 12 or more 80c each; tested \$1.50 each; select tested \$2.50 each. Apiary inspection and found no disease of any kind. Safe arrival and satisfaction guaranteed.

Sam Hinshaw, Randleman, N. C.

**PACKAGE BEES** and nuclei; don't fail to get price list and circular. Will save you money.

A. J. Heard, Rt. 1, Wellston, Ga.

**OUR NEW 1925 circular** and price list of our bees by the pound and queen bees is now ready. Let us mail you one.

M. C. Berry & Co., Box 697, Montgomery, Ala.

**GOLDEN** Italian queens and Nuclei for 1925; the big, bright, hustling kind (the kind that gets the honey); satisfied customers everywhere. Untested, \$1.00 each; 6 for \$5.00, 12 for \$10.00, \$75.00 per hundred. Tested, \$1.50 each. Nuclei, with queens, \$4.50 each; 10 or more, \$4.00 each. Safe arrival guaranteed.

E. F. Day, Honorville, Ala.

**FOR SALE**—Golden queens, producing bees solid yellow to tip. Select untested, \$1.50; tested, \$2.00; select tested, \$2.50. Safe arrival and satisfaction guaranteed; pure mating and prompt shipment. Print your address.

H. G. Karns, Victoria, Va.

**BOOKING ORDERS** for May delivery. Two-frame nuclei Italian bees and queen, \$4.00 each; 20 per cent cash with order. Everything guaranteed.

J. G. Prosser, Ft. Dodge, Iowa.

**BURLESON'S PACKAGE BEES**—Shipped without combs or honey, fed while in transit on sugar syrup, and guaranteed to be no chance to contract disease of any kind. For prices, etc., write

T. W. Burleson, Waxahachie, Texas.

**AM BOOKING ORDERS** now for my famous gray Caucasian queens; ready April 15. Untested, one, \$1.50; dozen, \$15.00. Circular free. Bolling Bee Co., Bolling, Ala. Zed Gafford, Prop.

**SATISFIED** you will be if you buy package bees and queens from me. Satisfied with the bees, my handling of your order, and your honey crop. Write for prices.

R. V. Stearns, Brady, Texas.

**PACKAGE BEES** from healthy stock. Shipping cages, large and light. I can ship thousands of pounds Queen bees, Italians and Carniolans. You cannot find better stock in the United States. One 2-pound package, \$2.50; five 2-pound packages, \$2.25 each; twenty-five or more, \$2.00 each. One untested queen, \$1.10; six, \$6.00; twelve, 90 cents each; twenty-five or more, 80 cents each. Booklet free.

M. G. Ward, Lathrop, Calif.

**IF YOU WANT** good, bright Italian queens, by return mail, send your order to us. Queens, \$1.00 each; \$10.00 per dozen; one pound bees with queen, \$3.00; 2 pounds bees with queen, \$4.75. We pay charges.

Graydon Bros, Rt. 4, Greenville, Ala.

**WE** are offering 250 selected, tested queens for breeding purposes. These queens were reared early last summer and selected during the fall for breeding. As we do not recommend mailing breeding queens, we will ship these on a two-frame nuclei for \$6.50 each. So as to insure you a good queen, we will not ship these breeders before April 25c. See our display ad for package bees.

Central Louisiana Apiaries, Oscar Mayeux, Proprietor, Hamburg, La.

**I AM BOOKING** orders for May delivery, from my best Caucasian or Italian race, 3-frame nuclei and queens. Apiary inspected.

Peter Schaffhauser, Havelock, N. Car.

**I AM** now booking orders for my leather-colored Italian queens and package bees. Write for prices.

W. O. Victor, Jr., Uvalde, Texas.

#### PACKAGE BEES—Circular free.

Van's Honey Farms, Hebron, Ind.

**I DO NOT** claim my combless packages are overweight, but I do claim they are full weight on arrival. My prices are in line, too. Let me tell you more about them.

R. V. Stearns, Brady, Texas.

**SEE** our display advertisement on page 87.

Loveitt Honey Co.

**QUALITY COUNTS**—Try Pinard's queens and package bees. Booking orders now for spring delivery. Circular free. Yours for better bees.

A. J. Pinard, Morgan Hill, Calif.

**PURE ITALIAN BEES**—Booking orders for 1925 delivery; 2 and 3-lb. packages. Bright and three-band queens. Write for prices. Member Southern Queen and Bee Association.

J. Allen, Catherine, Ala.

**SUPERIOR ITALIAN BEES & QUEENS**—Get our delivered prices; ship on day you name; no disease; ship only the best, you to be pleased in every way or your money back. Ten per cent cash with order; service and quality guaranteed.

W. C. Smith & Co., Calhoun, Ala.

**EARLY PACKAGE BEES & QUEENS** that make a surplus the first season. Most northern breeder in California. See larger advt.

J. E. Wing, Chico, Calif.

**TEN YEARS** of experience in breeding queens of quality Goldens, also gray Caucasian. Golden queens, one, \$1.25; dozen, \$11.50. Gray Caucasians, one, \$1.50; dozen, \$15.00. Pure mating. Safe arrival guaranteed in United States and Canada.

Tillery Bros., Rt. 5, Greenville, Ala.

**PACKAGE BEES**—Pure Italians. Write for prices; everything guaranteed.

J. J. Scott, Crowville, La.

**PACKAGES** with queen already introduced. Buy your packages with queens introduced and avoid loss. Best pure mated Italian queens. Guaranteed. State inspected. No disease. Let our circular tell you about them and explain the advantages of our package bees and introduced queens.

A. O. Smith, Rt. 12, Mt. Vernon, Ind.

**PACKAGE BEES** and three-band Italian queens that please. Our twenty years experience here in selective breeding of queens and the shipping of bees are at your service. No disease in this section. For prices, references, etc., write

Allenville Apiaries, Allenville, Marengo County, Ala.

**FOR SALE**—St. Romain quality bees, the pure three-banded Italian bees and queens at a very reasonable price. A 2-lb. package with queen, price \$3.00; a 3-lb. package, \$4.00; a 4-lb. package, price \$6.00. Orders are booked with 20 per cent down and balance 20 days before shipment. Deliveries to be made between April 15 and July 1, 1925. Some shipments can be made earlier if weather permits. Bees are shipped on a comb of emerging brood and enough honey for feed in transit. Bees are absolutely free from disease. I furnish health certificate with each shipment. I also guarantee safe delivery and satisfaction. Address to John St. Romain, Marksville, La.

**ITALIAN QUEENS**—Write for price list. C. B. Saunders' Apiaries, Merom, Ind.

**SEE** my display ad., page 78.

Jes Dalton, Bardelonville, La.

#### ORDER DIRECT FROM THE SHIPPER—

We do all work our ourselves, so there is no mistake to be made. Our nice three-banded Italian only, with a government health certificate. Shipped on comb of honey; natural feed for transit; easy to transfer. Each package contains a selected untested three-banded queen. 10 3-pound packages, \$45; 25 3-lb. packages, \$108.75; 50 3-lb. packages, \$212.50; 10 4-lb. packages, \$52.50; 25 4-lb. packages, \$127.50; 50 4-lb. packages, \$249.70. Will start shipping April 15; 15 per cent down, balance at shipping time. Orders booked in rotation.

C. A. Mayeux, Hamburg, La.

**WHETHER** it is package bees or queens, or both, that you need, let me tell you about mine. It will pay you.

R. V. Stearns, Brady, Texas.

**BRIGHT** Italian Queens for 1925.

J. F. Diemer, Liberty, Mo.

**GOLDEN THREE-BANDED** and Carniolan queens. Tested, \$1.00; untested, 75c each. Bees in 1-pound package, \$1.50; 2 pounds, \$2.50; 3 pounds, \$3.25. Safe delivery guaranteed.

C. B. Bankston, Box 65, Buffalo, Leon Co., Texas.

**MERRILL'S QUEENS**—\$1.00 each.

R. E. Merrill, Muncy, Pa.

**HARDY ITALIAN QUEENS**—\$1.00 each.

W. G. Lauer, Middletown, Pa.

### FOR SALE

#### HONEY IN PAIRS—

Atwater, Meridian, Idaho.

**FOR SALE**—80 acres, bee house 44x20; 140 colonies bees, ten-frame hives with equipment.

Chester E. Keister, Orangeville, Ill.

**UVALDE, TEXAS**, home and bees for sale. An attractive 4-room home with bath, sleeping porch and garage. City water and lights. Also a one hundred colony apiary, on good location in Uvalde County. Good schools. Write, R. S. Livingston, Cline, Uvalde County, Texas.

**GLADIOLI BULBS**—Closing out. Bargain. Van Wyngarden Bros., Hebron, Ind.

**FOR SALE**—Twenty Italian colonies; modern hives; \$8.00 each; spring shipment.

O. Biermann, Malcolm, Iowa.

**FOR SALE**—Mixed white blossom annual and biennial sweet clover seed. Seed hulled and scarified; 5 lbs. to 25 lbs., 25c a pound, parcel post prepaid. Large lots by express, prepaid, 20c a pound.

M. C. Berry & Co., Box 697, Montgomery, Ala.

**FOR SALE**—140 colonies of bees, complete extracting outfit and all necessary equipment; first-class in every way; guaranteed free from disease; if desired, four acres land and five-room house. Good location and market; crop failure unknown. Write for particulars.

G. A. Conaway, Bigelow, Mo.

**FOR SALE**—25 colonies of bees, bred for comb honey, in 8-frame hives; all on wired combs; full sheets; hives nearly new. Free from disease.

Mrs. C. F. Bender, Newman, Ill.

# Want to Buy?

Bees, Honey, Supplies, Fixtures, Queens, Locations, Extractors, Help, Cans, Jars, etc.?

# Want to Sell or Trade?

Bees, Queens, Supplies, Rifle, Camera, Old Books, Locations—In fact Anything?

# Classified Ads Will Do It

*At the small cost of only five cents per word per insertion.*

## THE AD

HONEY—Quote price car loads and less.  
Send sample.  
Hofmann Bros., Produce Co., St. Louis, Mo.

## THE RESULT

"We have gotten excellent results from the ad. we have run in your magazine for several months. We were amazed at the wide distribution of your paper, as we got offerings from practically every state within 900 miles of here.

"Hofmann Bros. Produce Co., St. Louis, Mo."

All our advertisers must be properly recommended before we will accept their copy. This is our readers' protection. In sending in your adv., therefore, include a recommendation from your banker, or at least refer us to him, and accompany your order with the cash at five cents a word, letter or initial.

OUR CLASSIFIED ADVERTISING PAGES PULL RESULTS

AMERICAN BEE JOURNAL, Hamilton, Ill.

SEE our display advertisement on page 87.  
Loveitt Honey Co.

FOR SALE—200 colonies of bees.  
Eph. J. Cotterill, Oakland City, Ind.

FOR SALE—70 colonies Italians; 10-frame size; about 150 extracting deep bodies, extra, with combs. All combs are No. 1, standard and jumbo size. One 4-frame automatic hand extractor, etc. Will sell all together very reasonable as have taken up other business. Bees near Fredonia, in good condition. Write for particulars.  
Geo. C. Ableson, Arkansas City, Kans.

FOR SALE—100 colonies bees in healthy condition. Write for prices.  
James Johnson, Pochontas, Ark.

FOR SALE—Good second-hand 60-lb cans, 2 cans to a case, boxed, at 60c per case, f. o. b. Cincinnati. Terms cash.  
C. H. W. Weber & Co., 2163 Central Ave., Cincinnati, Ohio.

FOR SALE—120 acres irrigated unimproved land in Wyoming, \$30 per acre. Will grow 500 tons alfalfa per year. Easy terms. Would accept some bees in 10-frames or larger equipment on this.  
Asher F. Dillard, Walthill, Neb.

FOR SALE—White and amber extracted honey. Write for prices. State quantity wanted. Dadant & Sons, Hamilton, Illinois.

## HONEY AND BEESWAX

HONEY IN PAILS—  
Atwater, Meridian, Idaho.

HONEY in 5 and 60-lb tins.  
Van's Honey Farms, Hebron, Ind.  
GOOD comb honey for sale.  
Frank Coyle, Penfield, Ill.

FOR SALE—Comb, extracted and chunk honey. Prices on request. Samples 15c.  
F. W. Summerfield, Waterville, Ohio.

FOR SALE—White clover, extracted honey in 60-lb. cans at 12½ cents a pound.  
Harry Chandler, Rt. 5, New London, Ohio.

CHOICE white clover honey.  
Lewis Klaty, Carsonville, Mich.

FOR SALE—5000 lbs. of 2-year-old honey in 60-lb. cans. White and amber mixed. Will sell at 10c per lb. f. o. b. my station.  
Lloyd St. Clair, Rt. 3, Wyaconda, Mo.

FOR SALE—White and water white sweet clover honey; put up in 5-gallon cans. Strictly first-class in every way. Write for prices, stating quantity wanted.

Dadant & Sons, Hamilton, Ill.

FANCY white clover honey, \$4.85 per 24 section case. Only 25 cases left.  
Turnure & Cramer, Red Cloud, Neb.

FANCY extracted clover honey, in 10-lb. pails, \$7.75 per case. Quality guaranteed. Cash with order.

Nelson Lamb, Bloomfield, Iowa.

HONEY in pails. Alfred Stutt,  
Rt. 5, Creston, Iowa.

WANTED—Car or less lots of extracted clover honey. Mail sample and quote lowest cash price.

A. W. Smith, Birmingham, Mich.

HONEY FOR SALE—Any kind, any quantity.  
The John G. Paton Co.,  
217 Broadway, New York.

CHOICE white clover honey in 5 and 10-pound pails and 60-pound cans. Prices on request. Sample 15 cents.  
Sundberg Bros., Rt. 3, Fergus Falls, Minn.

FOR SALE—Honey in 60-lb cans; sweet clover, basswood, white clover, and other flavors. Tell us what you want. Beekeepers who need more honey for their trade and solicitors should write us.

A. I. Root Co.,

230 West Huron St., Chicago, Ill.

FOR SALE—Our own crop white clover and amber fall honey in barrels and cans; also white alfalfa in cans. State quantity wanted and we will quote prices. Samples on request.  
Dadant & Sons, Hamilton, Ill.

FOR SALE—White honey in 60-lb. cans; also Porto Rican in 50-gal. barrels. Samples and prices on request.

A. I. Root Co.,

16-18 Jay St, New York, N. Y.

FINE QUALITY clover honey. Prices upon request. State amount wanted.  
C. S. Engle 1327 23rd St., Sioux City, Ia.

BEESWAX WANTED—We need large quantities of beeswax and are paying good prices now. Ship to us at Hamilton, Ill., or Keokuk, Iowa, or drop us a card and we will quote f. o. b. here or your own station, as you may desire.  
Dadant & Sons, Hamilton, Ill.

FOR SALE—Comb honey at reduced prices. State your wants.  
H. G. Quirin, Bellevue, Ohio.

HONEY FOR SALE in 60-lb. tins. White clover honey crystallized, 13c per pound. L. A. West Indian honey, liquid, 11c per pound.  
Hoffman & Hauck, Inc.,  
Ozone Park, N. Y.

CHOICE sweet clover honey for sale at very attractive prices. State quantity desired and we will quote you f. o. b. Council Bluffs or Kansas City. Signed

A. I. Root Company, of Iowa,  
Council Bluffs, Iowa.

DELICIOUS Nevada honey.  
C. E. Atwater, Fallon, Nevada.

FOR SALE—Clover honey in any quantity desired. Roland Brandt, Postville, Iowa.

FOR SALE—White clover comb and extracted honey. Prices on request.  
Roy Littlefield, Exira, Iowa.

CLOVER HONEY—Twelve 5-lb. pails, \$10; 2 60-lb. cans, \$15, f. o. b. Hamler.  
Appeldoorn, Hamler, Ohio.

## SUPPLIES

ROBINSON'S COMB FOUNDATION will please the bees, and the price will please the beekeeper. Wax worked at lowest rates.  
E. S. Robinson, Mayville, N. Y.

SOUTHWESTERN distributor for Robinson's comb foundation.  
Holloway Bros., Marietta, Okla.



**BEES FREE.** Trap stray swarms. Circular free.  
Ed. Swenson,  
Spring Valley, Minn.

**HAVE YOU** any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so send us a list.  
American Bee Journal, Hamilton, Ill.

**WESTERN BEEKEEPERS**—We can demonstrate that you can save money on buying bee supplies of best quality. Write for our latest price list.  
The Colorado Honey Producers' Association,  
Denver, Colo.

**CONNECTICUT** and Rhode Island headquarters for Root's Beekeepers' supplies.  
A. W. Yates, 3 Chapman St., Hartford, Conn.

### MISCELLANEOUS

**MAKE** queen introduction sure. One Saff cage by mail, 25c, 5 for \$1.00.  
Allen Latham, Norwichtown, Conn.

**WE HAVE NOW ON HAND**, from Paris, a number of copies of the excellent work of Perret-Maisonneuve, in French, entitled "L'Apiculture Intensive & L'Elevage des Reines." The first shipment was delayed over two months. The price of this very progressive work is \$1.50 by mail, prepaid.  
American Bee Journal, Hamilton, Ill.

**WESTERN HONEY BEE**, 428 S. Hewitt St., Los Angeles, Calif., published by Western beekeepers, where commercial honey production is farther advanced than in any other section of the world. \$1.00 per year. Send for sample copy.

**GLEANINGS IN BEE CULTURE**, published at Medina Ohio, is the most carefully edited bee journal in the world. Its editor-in-chief is Geo. S. Demuth. Its field editor is E. R. Root. Ask for sample copy.

**THE BEE WORLD**—The leading bee journal in Britain, and the only international bee review in existence. It is read, re-read and treasured. Will it not appeal to you? Specimen copy free from the publishers. The Apis Club, Benson, Oxon, England. Send us a post-card today. It is well worth your little trouble.

**THE "Archiv fur Bienenkunde"** is a valuable scientific publication. "It merits the appreciation of all beekeepers acquainted with the German language," says the Bee World (January, 1923). "The Archiv fur Bienenkunde, now in its fifth volume, is of as high grade as any bee journal which comes from abroad, dealing especially with the scientific aspects of beekeeping," says Gleanings in Bee Culture (February, 1923). Annual subscription, \$2. Specimen copy free. Publisher, Theodor Fisher, Freiburg im Breisgau, Kirchstrasse 31, Germany.

### HONEY YIELDS PER COLONY IN 1924 ABOUT AVERAGE

The average yield of surplus honey per colony in the United States this year is 46.2 pounds, or close to the average of 1913-1922, according to reports received by the U. S. Department of Agriculture from its special honey and bee correspondents. The low average production of 39.1 pounds was made in 1923. From 1913 to 1924 the lowest yield was 32.2 pounds in 1914, and the highest 59.1 pounds in 1920.

The reports of correspondents also indicate that only 27.7 per cent of the honey taken off the hives will be shipped out of the communities in which it was produced. Last year about 27.9 per cent of the crop was sold to outside markets, and ordinarily about 33.4 per cent. From 1915 to 1924 the tendency on the whole has been toward increased local honey consumption relative to the production.

Comb honey is estimated to be

**WANTED**—Experienced and aggressive bee-man to operate apiary on salary and commission. Write fully, giving age, education, experience and wages desired.  
R. Law, 131 Cedar St., New York City.

**THE DADANT SYSTEM IN ITALIAN**—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

### WANTED

**HONEY IN PAIRS**—  
Atwater, Meridian, Idaho.

**WANTED**—To exchange one auto knitter, valued \$75.00 for honey extractor, bee supplies or bees.  
Ed. Mitchell, Castalia, Ohio.

**EXCHANGE**—Oliver typewriter, Oliver gas burner No. 2, new; Stevens 25, rim fire, single rifle, new. Want extracted honey, white.  
James Wheeler, Maroa, Ill.

**WANTED**—To buy hanging section holders and fences for 4¼x4¼x1½ sections.  
C. H. Wiley, Catlin, Ill.

**YOUNG MAN** with six years' experience in both commercial honey production and queen rearing wishes position this season in either branch of business. Best references furnished.  
J. C. Allen, Alpine, Ala.

**WANTED**—Positions in apiary by experienced graduates of the National Farm School, Farm School, Pa.

**WANTED**—Position in commercial apiary, by man, aged 36; have had college course in beekeeping; also 3 years' practical experience in small apiary.  
J. T. Mason, Mooresburg, Tenn.

**WANTED**—Single, energetic assistant of good habits, in our 700 to 800 colony extracted honey producing and marketing business. Moderate farming carried on in connection, at odd times. Largest and completely modern equipped central extracting plant in the country. Extracting capacity 1,400 pounds per hour. Most economical and efficient swarm control methods practiced. Must be handy at beekeeper's shop work. Give experience with speed and heavy duty trucks, also present occupation, height, weight and reference in first letter, or expect no reply. Can furnish steady employment to right party. Objection to cigarettes and tobacco chewing. Can also use student help with some previous experience. Further particulars on application  
The Hofmann Apiaries,  
Janesville, Minn.

**WANTED**—By experienced man—bees on shares.  
M. Knudsen,  
1427 N. Dearborn St., Chicago, Ill.

**WANTED**—Man to work with bees. I operate a good, clean package business in spring and run for honey in fall. I will give right party good position. State age, height and weight. Inexperienced preferred.  
M. G. Ward, Lathrop, Calif.

**WANTED**—To employ a bright, industrious young man, desiring to learn queen breeding as well as general honey production. Many of the largest and most successful queen breeders and honey producers in the United States have made their start with us. We also have a splendid partnership opening for the right man in 1926. We furnish board and small wages.  
M. C. Berry & Co.,  
Box 697, Montgomery, Ala.

**HELP WANTED**—Young unmarried man to handle about 100 colonies for both comb and extracted honey. Want man interested in greenhouse, flower gardening and landscaping. Prefer inexperienced help. Opportunity for permanent connection for the right man.  
B. F. Kindig, East Lansing, Mich.

**WANTED**—Assistant in my queen and package business for 1925. Give age, reference, experience and salary.  
N. Forehand, Gonzalez, Fla.

**WANTED**—A comb-honey man from April until October. State qualifications, and wages. Give references.  
R. S. Becktell, Rifle, Colo.

**WANTED**—Position; experienced beekeeper, age 27. Seven years' experience in comb and extracted honey production; must satisfy or no pay. Will be ready to start work after March 1. If interested, write,  
Charles Holecck, Rt. 3, Garner, Iowa.

**EXPERIENCED APIARIST** wants position.  
Write Ben Steen, Manning, Iowa.

**WANT** bees and equipment for interest in good Minnesota unimproved forty or quarter.  
A. M. Wise, Appleton, Minn.

**WANTED**—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5c a pound for wax rendering.  
Fred W. Muth Co.,  
204 Walnut St., Cincinnati, Ohio.

**WANTED**—White clover extracted honey. State price and send sample.  
Roscoe F. Wixson, Purchasing Dept.,  
Dundee, N. Y.

about 25 per cent of the total crop, or less than 30 per cent of last year. Extracted honey also has declined to 55 per cent this year from 60 per cent last year. The percentage of the crop represented by chunk honey has about doubled and has risen to 18 per cent from 10 per cent last year. This increase is chiefly determined by the marked increase in the South, where a large portion of the honey is sold as chunk and to the low total production of California, where almost no chunk honey is sold.

### Our Apologies to Alfonsus

The article, published last month, on "Milk and Honey," (translated by George E. King), was an original contribution in German, sent us by Louis Alfonsus when he was in Europe. We omitted his name as the author.

The manuscript of this article was entirely lost and the translation was the only material we had. It did not bear the author's name and our files gave no clue to it.

A letter from Alfonsus, who is now at Oconomowoc, Wisconsin, having come here some time ago from Europe, soon cleared the mystery.

His article has attracted much attention, since it bears an important message of health which is welcome information to all readers. It offers a new field of work for our own dieticians and a new and beautiful avenue of publicity for beekeepers. Read it again.

### NEW POSTAL REGULATION

The December supplement of the United States Postal Guide publishes a regulation that liquids to foreign countries can only be forwarded by mail when in quantity of sixteen ounces net weight. Mr. Frank Rauffuss, manager of the Colorado Honey Producers' Association, states that this will practically put a stop to the forwarding of honey by parcel post to foreign countries. The matter is being referred to the Traffic Committee of the League for further investigation.



## ROOT QUALITY QUEENS

will put new life into your apiary. Note what a commercial honey producer of Ontario says about them: "The fifty queens I received from you are the best I ever received from any source."—Huber Burke, Lindsay, Ontario, Canada.

### QUEEN PRICES APRIL 15 TO OCTOBER 15

Quantity.	1 to 9	10 to 24	25 to 49	50 to 99	100 or over	Quantity.	1 to 9	10 to 24	25 to 49	50 to 99	100 or over
	each.	each.	each.	each.	each.		each.	each.	each.	each.	each.
Untested	\$1.50	\$1.35	\$1.25	\$1.10	\$1.00	Tested	2.50	2.25	2.10	2.00	1.85
Sel. Unt.	2.00	1.80	1.70	1.55	1.45	Sel. Test	3.00	2.70	2.55	2.40	2.25

PACKAGE BEES to establish new apiaries, to replace winter losses or to strengthen weak colonies. Write for our new booklet on "How to Build up an Apiary from Package Bees."

### PRICES OF BEES IN TWO-POUND COMBLESS PACKAGES BY EXPRESS—April 15 to August 15.

E310800—2-lb. package of bees, 1 to 9 pkgs., \$5.00 each; 10 to 24 pkgs., \$4.50 each; 25 or more pkgs., \$4.00 each.

Add price of queens wanted to package price given above. Large quantity lots quoted on application. These prices are F. O. B. shipping point.

NOTE: Early spring delivery on package bees will be made from some southern point. Beginning May 20, package orders can be filled from Medina.

**THE A. I. ROOT COMPANY** WEST SIDE STATION MEDINA, OHIO

Thank you! we are filled up with orders till May 10th, can send some after the 10th.

**J. G. PUETT & SONS, MOULTRIE, GA.**

## THE BEST PLACE TO BUY PACKAGE BEES

Is where reliability, best quality, prompt service and square dealings are the essential principles, and where guarantees are worth something

The above is the foundation of my business and shall be maintained. To those who have not heretofore been satisfied with their purchases of package bees, I invite the most rigid investigation of my business and business methods. I guarantee to satisfy you, else will promptly refund your money. Frequently, letters are received like this: "Your price is a little higher, but am sending you the order as I am assured of having my bees arrive on time."

### DELIVERED PRICES TO JUNE 1st, EITHER BY PARCEL POST, POSTPAID, OR PREPAID EXPRESS

1-lb. package, including select untested queen	\$3.50	10 or more packages, either size, 25c per package less.
2-lb. package, including select untested queen	5.25	If queenless packages are desired, for strengthening weak colonies, deduct \$1.25 per package.
3-lb. package, including select untested queen	6.25	

### THREE-BANDED LEATHER COLORED ITALIAN QUEENS

1 select (one grade) untested queen	\$ 1.25	10 select (one grade) untested queens	10.00
5 select (one grade) untested queens	5.50	Select tested queens, each	2.00

Safe arrival of bees and queens, pure mating, and perfect satisfaction guaranteed. Furthermore, I make good my guarantee. Ten per cent cash to book an order, balance just before shipping. Will ship on the day you name, having the bees, men and equipment to handle orders promptly. Should you find a queenless colony this spring send to me for a young queen to save them. I will not disappoint you. Health certificate will accompany each shipment. A trial order will convince you I have the highest quality of bees and queens.

**JASPER KNIGHT, HAYNEVILLE, ALABAMA**

You can have cash for your wax and old combs or cappings at the market price, or we allow a little more in exchange for supplies

Write for our terms and prices

"falcon" Supplies, Queens, Foundation

Booklet, "Simplified Beekeeping for Beginners" free

Write for catalog

**W. T. FALCONER MFG. COMPANY, Falconer, (NEAR JAMESTOWN) N. Y., U. S. A.**

"Where the BEST Beehives come from"

## BURR COMBS

### An Interesting Family

By C. P. Dadant.

This time, dear reader, it is the old man of the Journal who is going to try to entertain you and he will not give you either slang or jokes. But he thinks that he can please you by describing a very interesting family of whom you have all heard and with which he is very well acquainted.

The head of this family is well known to all beekeepers, either by his writings, his reputation or his presence at bee meetings. His name is Frank C. Pellett. I would not be telling tales out of school if he was here. But his health has been bad, and the physician has given him orders to go south for the winter. So he is now trying to kill time, to hunt honey plants, visit beekeepers and get acquainted with Texas, New Mexico and Arizona. He was an active Iowa beekeeper once, managed to organize a big State Association, became State Inspector, and finally left Iowa to become an Illinois sucker, at the headquarters of the American Bee Journal, where he promoted the Dadant System of beekeeping, because he considered it the best he had yet used.

Mr. Pellett has a very nice, sweet-looking, pleasant wife and four children, three boys and a girl. They came to live in Hamilton and became identified with the Bee Journal family in 1917.

Kent, the oldest of the children, was then 12 years old. He is now 20. There are plenty of earnest, capable boys in the world, but not many as active, as positive and as manlike as Kent. Laws are passed to prevent parents from causing their children to work too early in life. But in Kent's case, a law to prevent him from working, of his own accord, between school hours, or at times when other boys are still in bed, would have been useless unless an officer of the law had spent his time watching him; for although he went to school regularly, he spent all his spare time at work. He hired himself to clean offices in early morning hours, he worked after school at whatever he could find to do. In 1919, when he was 14 years old, he worked regularly, during all the hours that he could spare from his studies, at the printing plant where the job work on the honey labels is done for the sub-

scribers of the American Bee Journal. Seeing his determination to make headway, his father bought a half interest in the printing plant. In the years between 1922 and the present time, Kent purchased the remaining half of the plant and saved \$1,700. During the present winter, he has been attending college at Ames, with the help of a small portion of the money which he has thus saved. Mind this, Kent is not fond of the work of printing, but he is industrious and wants to succeed. He is likely to go far, since it is just his sort of steady, determined climbing that leads to achievement. There is no other path to success that I know of.

Melvin, the second boy, is not fond of indoor work. He prefers field work. So, as soon as he was big enough to manage a one-horse plow, he rented a few lots of land, near his father's home and went to planting vegetables, between school hours and at the end of the term. He kept the vegetable business in such good shape that he sold \$189.50 worth of tomatoes, \$89 worth of Lima beans and about \$50 worth of other vegetables during the past summer. He kept account of all he grew and of all he sold, for he took the vegetables to market himself, sometimes borrowing a delivery wagon and hauling his stuff to another city 12 miles away when the home market appeared to be overstocked. This keeping of accounts enabled him to make a statement for the National Junior Garden Contest, with certificates signed by neighbors and business men who knew of his work; this enabled him to secure second prize in this national contest, which brought him a premium of \$25 in cash and an expensive overhead irrigation sprinkler, donated by the manufacturers.

I forgot to state that, in the spring of 1924, he bought a power cultivator, which enabled him to do nearly all of his work of plowing and hoeing without having to spend anything for horse hire. This cultivator was paid for out of the earnings of previous years. The manufacturer of Bolens Power Hoes, "The Gilson Manufacturing Company," made a special advertising leaflet in which they gave Melvin's photo and described his year's work with their

machine. The information was first published in the "Market Growers' Journal" of October 16.

Melvin is now 18 years old. As he graduated in the Hamilton High School in 1923, he spent the early part of that winter husking corn for a farmer, at so much per bushel, and said that he much preferred this to indoor work. It is indeed a healthful occupation, though a little tiresome. Melvin expects to pay his way through college studying agriculture, by and by.

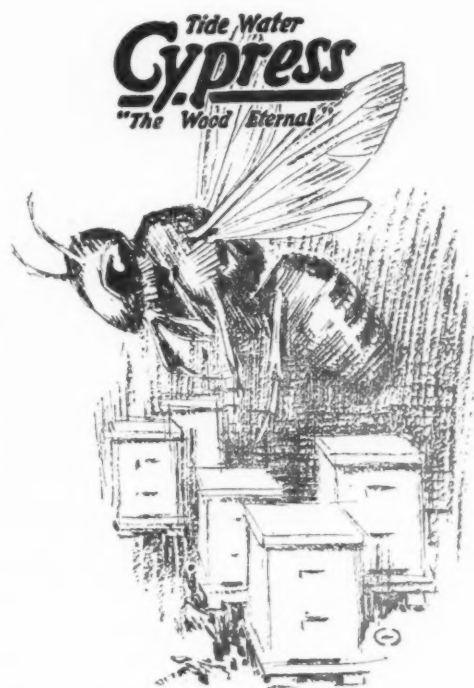
Melvin and Kent, at the present time (January), are selling honey for the Dadants at Fort Madison. At first they barely made expenses, but they are making it pay now.

Fred, the youngest of the boys, is only 16; he graduated from the Hamilton High School at 15, and he has since spent his time in the printing office, like Kent, and will also pay his way through college. He has occupied all his leisure hours without the prompting of anyone. He is a musician, quite fond of the violin. They are all three fond of reading.

Don't you think those boys will achieve something in their future life? We have in our town dozens of boys, from 12 to 21, who spend most of their time on the street corners, smoking cigarettes and cracking jokes, or in the soft drink parlors eating ice cream or imbibing sweet drinks. Which, in your opinion will succeed best in life?

The little girl, Ruth, is the youngest of the family. She is still in school, but like her brothers, she is a bright student and no doubt will follow their footsteps in ambition and usefulness.

I have often heard people complain of the difficulty of securing a job. Many people appear unable to find a position. I cannot see why. I have never been without a job, neither do I believe the Pellett children will ever be short of a job. Why? Because they do not wait for the job to come to them, but seek the opportunities and have always been willing to work, even when the job was not exactly to their taste, until they could secure what they liked. Opportunity will never strike at our door unless we keep our eyes and ears open for it.



# BOTTOMS

should be nothing but *all-heart* Tidewater Cypress, the true "Wood Eternal." (*Of course.*)

Its defiance to decay makes it a big money-saver, *figured by the year.* Ever tried it?

Be sure you get the genuine "*Tidewater*" species. Buy it by the Arrow Trade-Mark.

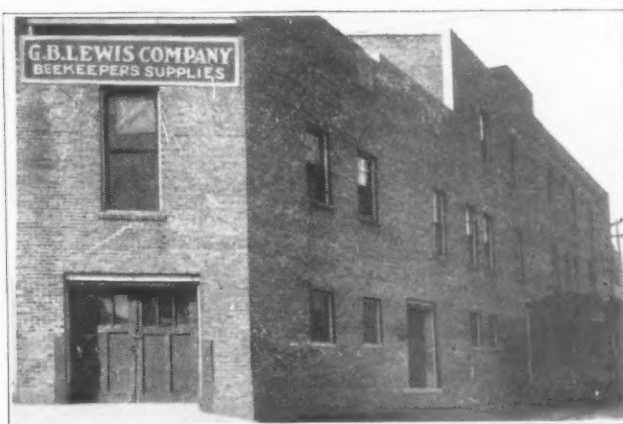
## SOUTHERN CYPRESS MANUFACTURERS' ASSOCIATION

1251 Poydras Building, New Orleans, La., or 1251 Graham Building, Jacksonville, Fla.



Insist on TRADE-MARKED Tidewater Cypress of Your Supply Dealer or Local Lumber Yard.

If he hasn't it, LET US KNOW.



## Lewis Beeware Dadant's Foundation

In Sioux City, Iowa ready for prompt shipment

See the picture of the branch office and warehouse at the left in charge of Mr. Cregar, an Iowa boy. Beside knowing west central state conditions, his first job is to give 24-hour service on your orders. Ask him for free copy of "How to Produce Honey."

## G. B. LEWIS COMPANY

23 W. Third Street  
Sioux City, Iowa

## Light Three Banded Bees and Queens for Spring Delivery

In reading this advertisement you should remember that this is our 15th year in the package and queen business, and you are taking no chance by ordering your wants from us. We intend making beekeeping a lifetime business. Our aim is to make new customers and to better our business.

All bees are shipped on a standard frame natural food for bees in transit. Will start shipping April 15th, depending on weather conditions. Ten per cent with order, balance at shipping time.

In order to give you such low prices and service we are unable to sell less than 10 packages.

10 2-lb. with selected untested queens	\$ 37.50	50 3-lb. with selected untested queens	212.50
25 2-lb. with selected untested queens	90.00	100 3-lb. with selected untested queens	400.00
50 2-lb. with selected untested queens	175.00	10 4-lb. with selected untested queens	52.50
100 2-lb. with selected untested queens	325.00	25 4-lb. with selected untested queens	127.50
10 3-lb. with selected untested queens	45.00	50 4-lb. with selected untested queens	250.00
25 3-lb. with selected untested queens	108.75	100 4-lb. with selected untested queens	475.00

5-lb. swarm with queen and 2 frames, \$6.50 each package.

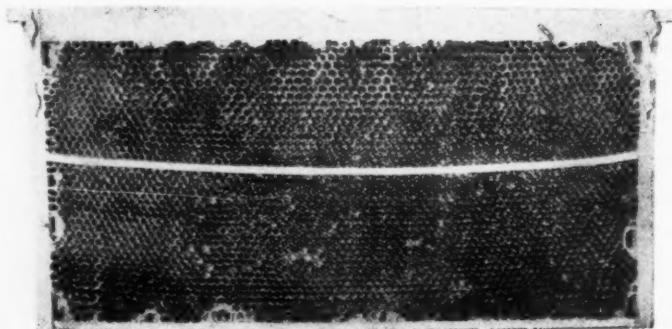
All bees go out with Government health certificate to insure freedom of bee disease. Safe delivery guaranteed. See our classified adv. for breeding queens.

Central Louisiana Apiaries. Oscar Mayeux, Prop. Hamburg, Louisiana



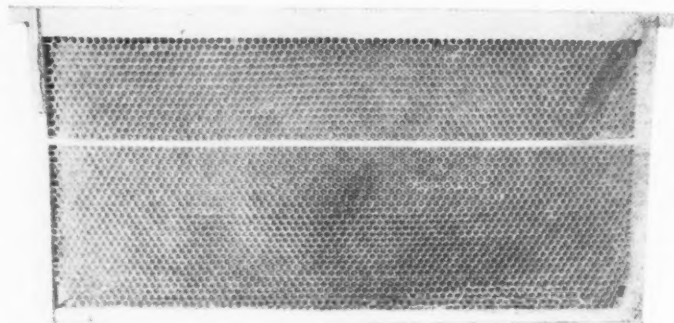
# 25%

## More Worker Brood



Typical comb built on ordinary foundation. Thousands of such combs in use over the country are cutting down the honey crops very materially. A beekeeper who uses combs like this one is paying for combs like that shown below, without getting them. He is paying an exorbitant price in the loss of honey, due to the rearing of useless drone bees. Very few of the cells above the white line are fit for worker brood. Why pay the price and not secure the benefits?

of an extra crop of honey from each colony of bees. The wonderful increase in the worker brood is due to the non-sag qualities of this foundation, which allows the maximum number of worker cells. The bees accept Three-ply Foundation instantly and draw it out rapidly because of the natural base angle for which AIRCO Foundation is famous. To be wise is to be economical and to be economical is to use Three-ply AIRCO Foundation.



This is an average Three-ply comb. Note there are no drone cells in the upper third of the comb. The line of cells is practically straight so that the entire comb is available for worker brood.

### *The Non-Sag Foundation*

*"The Strength is in the Comb"*

## THE A. I. ROOT COMPANY

MEDINA, OHIO